The Journal of the American Medical Association

Published Under the Auspices of the Board of Trustees

Vol. 137, No. 3 — CHICAGO, ILLINOIS — May 15, 1948

COPYRIGHT, 1948, BY AMERICAN MEDICAL ASSOCIATION

MANAGEMENT OF RECURRENT RENAL CALCULI

COL. JAMES C. KIMBROUGH, M. C.
Chief, Urology Section, Surgical Service, Walter Reed General Hospital
and
MAJOR JOHN H. FURST, M. C.
Resident in Urology, Walter Reed General Hospital
Washington, D. C.

This paper presents the management of recurrent renal calculi in patients observed at Walter Reed General Hospital during the one year period April 1, 1946 to April 1, 1947. During this period, 13,977 patients were admitted to Walter Reed General Hospital; of these, 793 were treated in the surgical service of the urology section.

Only the patients treated by operative procedures are included herein. A large number were treated by measures other than operative—spontaneous passage, attempts at dissolution and manipulative procedures. Many of these were treated on the sections of neurology (patients with paraplegia) and orthopedic surgery (amputees). There were more than 1,500 cases of paraplegia resulting from battle casualties of World War II, 90 per cent of which were complicated by neurogenic conditions of the bladder. There were more than 15,000 amputees. The periods of hospitalization and recumbency resulted in a high percentage of complicating and recurrent renal calculi. Accurate statistics concerning the incidence of calculi in these patients are not available at present, but will be in the near future.

The magnitude of the treatment of calculi in these patients can be appreciated when the long periods of recumbency are considered. Many of them have experienced repeated manipulation and operation. The calculi are often bilateral, and the conservation of renal tissue is imperative.

The causation of renal calculi has been adequately presented in recent years by Randall,[1] Keyser,[2] Flocks,[3] Vermooten[4] and others. The incidence has been reported by Higgins,[5] Cabot and Crabtree. Flocks has dealt extensively with methods of prevention. The dissolution and manipulative treatment has been considered by Higgins, Councill,[6] Ferguson,[7] Balkus,[8] Browne[9] and others. Operative procedures have been thoroughly described by Priestley,[10] Bugbee[11] and Yunck and Forsythe.[12] Lowsley and Menning's[13] work on repair of renal lesions is outstanding. Bugbee's description of secondary renal operations has been a guide for the procedures for treatment in the cases herein reported.

The incidence of recurring renal calculi has been reported within a wide range variation. Cabot and Crabtree (cited by Higgins[5]) reported an incidence of 56 per cent recurrence following nephrolithotomy and 51 per cent following pyelolithotomy. Fifteen to 30 per cent recurrence is not unusual. Higgins, with his rigid management, reduced the incidence in his series to 4.7 per cent.

Fourteen of the 25 patients included in this report had previous operations for the removal of calculi, an incidence of 56 per cent. This in no measure indicates the general incidence of recurrence in Army hospitals, since it does not consider the patients from whom stones are removed by operation and manipulation or passed spontaneously and who are not followed up after such treatment.

So-called recurrence may be due to incomplete removal of all calculi at operation. This error can be eliminated by roentgenologic examination at operation and adequate postoperative follow-up. It is possible that some of the reported early recurrence was due to incomplete operation.

Because of the large number of patients in Army hospitals who require prolonged treatment as bed patients, recumbency with attendant urinary stasis becomes a major causative factor. Patients with paraplegia and with complicating neurogenic conditions of the bladder are a special problem. These patients have had urethral or suprapubic drainage; even when drainage is no longer necessary, there is usually considerable residual urine. Almost all of them have infection of the urinary tract. The recumbency, stasis and infection cause a high incidence of renal calculi.

Read before the Section on Urology at the Ninety-Sixth Annual Session of the American Medical Association, Atlantic City, N. J., June 13, 1947.

Dr. Lloyd G. Lewis, Chief of the Urology Section, Walter Reed General Hospital (1942-1946), and Consultant in Urology to the Secretary of War, contributed materially in the management of the patients. Captain David K. Worgan, Captain Carl Denslow and Lieutenant Frederick T. Reuter, Residents in Urology, Walter Reed General Hospital, assisted in carrying out the treatment. Master Sergeant Ralph W. Green and Sergeant Nadine L. Drake assembled the material, compiled the case records and prepared the slides and photoerranhs.

1. Randall, A.: The Initiating Lesions of Renal Calculus, Surg., Gynec. & Obst. 64:201 (Feb.) 1937.
2. Keyser, L. D.: Studies in Urinary Calculosis, J. Urol. 54:194 (Aug.) 1945.
3. Flocks, R. H.: Calcium Urolithiasis, J. Urol. 43:214 (Jan.) 1939. The Prevective Treatment of Calcium Urolithiasis, J. Urol. 53:427 (March) 1945.
4. Vermooten, V.: Calcium Plaques (Randall), J. Urol. 48:27 (July) 1942.
5. Higgins, C. C.: Prevention of Recurrent Renal Calculi, J. Urol. 30:499 (May) 1936.
6. Councill, W. A.: Treatment of Ureteral Calculi, J. Urol. 53:534 (April) 1945.
7. Ferguson, C.: Ureteral Calculus Extractors, J. Urol. 48:256 (Sept.) 1942.
8. Balkus, V. A.: Loop Catheter in the Treatment of Ureteral Calculi, J. Urol. 50:667 (Dec.) 1943.
9. Browne, H. S.: Experiences with Ureteral Calculi, J. Urol. 50:301 (Sept.) 1943.
10. Priestley, J. T.: Simultaneous Bilateral Operations for Renal and Ureteral Calculi, J. Urol. 47:255 (March) 1942.
11. Bugbee, H.: Nephrolithotomy for Recurrent Branching Calculi, J. Urol. 58:99 (Aug.) 1944.
12. Yunck, W. P., and Forsythe, W. E., Jr.: Calyceal Resection: Report of Clinical and Experimental Cases, J. Urol. 46:396 (Sept.) 1941.
13. Lowsley, O. S., and Menning, H. H.: Treatment of Rupture of Kidney, J. Urol. 45:253 (March) 1941.

Local damage to renal tissue by infection, battle injury or operative procedure provides a fertile field for recurrence and has been an important factor. When persons with moderate obstruction at the ureteropelvic juncture or the infundibulum, who have no symptoms under normal living conditions, become bedridden, sufficient stasis is produced to become a factor in the formation of calculi.

Bacillus proteus has been the predominating bacterium in cases of recurrent disease, and reformation of calculi is almost certain to take place unless this organism is eradicated before or after operation. Urea-splitting staphylococcus is a frequent causative agent. Pseudomonas aeruginosa is often present. It has been difficult to evaluate the effect of this organism. The serum phosphorus and calcium have been normal in all cases.

The recurrent calculi are often of the branched type and conform to the shape of the calyx occupied. The stones are usually multiple and adhere to damaged renal tissue. The chemical composition is fairly uniform and consists predominantly of calcium and ammonium phosphate; magnesium and ammonium (NH_4) groups are usually present.

Preoperative roentgenologic studies, including excretory and retrograde urograms, will demonstrate the number, size and location of calculi and the associated renal pathologic changes. Such information is valuable in planning the operation before surgical exposure. Appropriate tests of renal function and examinations of the blood and the urine are essential in evaluating the general condition of the patient prior to treatment.

The removal of renal calculi is only an aspect in the management of the disease and may be misdirected effort unless there is appropriate postoperative care to prevent recurrence of the calculi and to maintain the general health of the patient.

Calculi in the kidney are foreign bodies, always cause damage and should be removed. Observation with appropriate roentgenologic studies may be carried out in patients without infection and obstruction; however, delay in removal may be disastrous. One cannot predict when infection will cause serious danger or when obstruction will convert the "silent" stone into one of grave emergency. Time should not be lost in awaiting spontaneous passage. Dissolution with various irrigating solutions has proved unsatisfactory. Manipulation with catheters, loops and other devices is often a dangerous procedure. Persistence and procrastination cease to be virtues when one employs nonoperative measures to remove urinary calculi.

During the one year period from April 1, 1946 to April 1, 1947, 25 patients were treated for renal calculus by operation. Twelve of these had one operation and 13 had one or more previous operations for renal calculi. Two had bilateral calculi removed. The calculi were removed from 8 (32 per cent) by pyelolithotomy, from 3 (12 per cent) by nephrolithotomy, from 7 (28 per cent) by nephropyelolithotomy, from 4 (16 per cent) by calyceal resection and from 3 (12 per cent) by nephrectomy.

Pyelolithotomy is the operation of choice, but it is rarely possible as a secondary operation. Nephrolithotomy may be employed in primary or secondary operation when the stone is readily accessible by incision through renal substance. Nephropyelolithotomy is used in cases in which nephrostomy drainage is required, because of infection or hydronephrosis, and is oftenest employed in secondary operation. Calyceal resection is used in cases in which the calculi are held in a calyceal cyst (primary operation) or in cases in which the calculi are retained in a damaged calyx (secondary operation). Nephrectomy (3 cases) was performed when the kidney was damaged beyond hope of salvage and the opposite kidney was in good condition. Measures to induce spontaneous passage, dissolution by dietary measures and irrigation and removal by various methods of manipulation have been futile in these complicated cases.

Operations for Renal Calculi (April 1, 1946 to April 1, 1947)

	Primary Operation	Secondary Operation	Total No.	Percentage
Pyelolithotomy	7	1	8	32
Nephrolithotomy	1	2	3	12
Nephropyelolithotomy	2	5	7	28
Calyceal resection	1	3	4	16
Nephrectomy	0	3	3	12
Total patients	11	14	25	100
Total operations (2 patients had two operations)			27	

Prior to operation, efforts have been made, often unsuccessfully, to eradicate infection. The organisms most frequently observed are B. proteus, staphylococci, Escherichia coli, Aerobacter aerogenes and Ps. aeruginosa. The infection can usually be eradicated with sulfonamide drugs and penicillin. Streptomycin has been employed in selected cases.

In patients who have had one or more operations, the incision usually removes the scar of the previous incision. The twelfth rib is resected when necessary, in order to obtain adequate exposure; subperiosteal resection is preferred. The peritoneum and the renal fascia are exposed. There are usually dense adhesions of the kidney to the adjacent tissue. Subcapsular exposure is carried out by making an incision through the renal fascia (fascia of Gerota) and the renal capsule, and the kidney is delivered through the capsular incision. The capsule at the pedicle is incised with a knife or dissected with scissors, exposing the renal vessels, and the pelvis is isolated. Rubber-covered curved hemostat clamps are placed about the pedicle to assure control of hemorrhage. The necessary nephrotomy incision or calyceal resection is carried out, and the calculi are removed. Calyceal resection is done in cases in which the renal tissue is damaged and cortical stones are present. Injured renal tissue is a fertile field for recurrence and must be removed along with the stones. The renal pelvis is examined, and obstruction of the ureteropelvic juncture is relieved. The pelvis is usually opened and the ureteropelvic juncture examined with a no. 12F bulb.

Nephrostomy drainage and a ureteral splint are usually employed. The nephrostomy incision or calyceal resection is closed with mattress or ribbon gut sutures through the tough fibrous capsule, and the hemorrhage is controlled by incorporating pads of fat or oxidized cellulose gauze. The fibrous capsule is closed about the renal tissue, leaving the kidney in its original position. A cigaret drain to the renal area is inserted, and the incision is closed with no. 1 chromic surgical gut, with figure-of-eight interrupted sutures. The skin is approximated with silk. Roentgenologic examination is carried out at the operation to ascertain the position of remaining calculi and to insure the complete removal of all fragments. Several years' experience with this procedure has emphasized the importance of simple apparatus. Complicated technics with special devices

have been unsuccessful. In present practice, an 8 by 10 inch (about 20 by 25 cm.) cassette in a sterile container is placed just behind the renal area and the x-ray unit, covered with sterile drapes, is placed on the abdominal approach. Exposures are repeated until

Fig. 1 (case 1).—Urogram made before the injection of the contrast medium, showing the calculus in the region of the left kidney prior to operation.

the roentgenograms indicate that all calculi have been removed.

Immediate postoperative care is important. Irrigation with Suby's solution "G," a solution of citric acid, magnesium oxide and sodium carbonate of p_H 4, or "M," a variation of the solution with a p_H of 4.5, is begun

Fig. 2 (case 1).—Excretory urogram made five minutes prior to operation, showing the absence of shadow in the left kidney.

on the second or third day. The cigaret perirenal drain is removed on the fifth or sixth day. During the fourth week, cultures are made and a urogram through a nephrostomy tube is carried out. The nephrostomy drain and the urethral splint are removed in the fourth or fifth week, when it is ascertained that the infection is cleared and that drainage is no longer necessary. The patient is usually up and about by the tenth day and able to leave the ward a few days after the drain is removed.

The pleura was opened in 2 patients. With modern anesthesia, this accident causes little apprehension. The pleural rent is closed with mattress sutures to the costal margin, and the pneumothorax is given adequate attention. Convalescence was not complicated by such accidents.

The peritoneum was opened in 3 patients. These accidents not only caused no complications but gave opportunity for more adequate examination and exposure before closure of the peritoneum. The essential points of operation are as follows:

1. Adequate exposure
   - Removal of rib
   - Subcapsular approach
2. Avoid damage to renal tissue
3. Control hemorrhage
   - Pedicle clamps
   - Oxidized cellulose
   - Fat pads
   - Ribbon or mattress sutures
4. Resection of damaged renal tissue (calyceal resection, wedge incision, capsule cover)
5. Relieve ureteropelvic obstruction
6. Avoid injury to adjacent structures
   - Pleura
   - Peritoneum
7. Ascertain that all particles of stone have been removed
   - Roentgenogram at operation
8. Adequate postoperative drainage and irrigation
   - Nephrostomy drains
   - Ureteral splints
   - Solutions "M" and "G"

Postoperative hemorrhage occurred in 1 patient on the ninth day and continued in alarming degree for three days. The hemorrhage ceased spontaneously on the third day, at which time nephrectomy was being seriously considered.

Infection often recurs following the operation. Sulfadiazine, 4 Gm., and penicillin, 600,000 units in oil, are given daily during the postoperative course. Streptomycin is used in selected cases.

The treatment after operation is designed to prevent the recurrence of calculi and to carry out measures to maintain the general health of the patient. The patient who has had treatment for renal calculi presents an optimal case for recurrence in that he has the potential, local and constitutional diathesis for the formation of stone.

When the physician has removed the causes of obstruction and has eradicated infection, it devolves on the patient to regulate his diet and maintain a proper intake of fluid to insure against recurrence.

The maintenance of mobility and the avoidance of the lethargy of recumbency is important, the responsibility of which often devolves on the patient.

The regimen for the prevention of recurrence may be summarized as follows:

1. Maintain intake of fluid at minimum of 3,000 cc. daily
2. Avoid urinary stasis
   - Movement of patient
   - Correction of obstruction at operation
   - Provide adequate drainage
   - Maintain adequate fluid intake
3. Eradicate infection
   - Intake of fluid
   - Chemotherapy
   - Correct stasis
4. Dietary measures
   - Acid ash
   - High content of vitamins A and B
   - Limit intake of calcium.
5. Adequate postoperative examination
   - Urine cultures
   - Roentgenograms: excretory and retrograde urograms

Roentgenologic follow-up should be carried out at

three month intervals, in order to note early recurrence.

REPORT OF CASES

CASE 1.—W. T. F., a white man aged 54, was admitted to the hospital on Jan. 22, 1947, with acute colic of the left kidney. A roentgenogram on admission showed a shadow in the region of the left kidney, 2 by 3 cm. in diameter.

Previous History.—Operation for removal of a calculus from the left kidney was performed in 1936 and again in 1938. He remained free of symptoms from 1938 until July 1946. Gross hematuria developed in July, but subsided in a few days. He experienced pain in the left renal region in September.

Physical Examination.—Physical examination disclosed a well nourished well developed man. His blood pressure was 110 systolic and 80 diastolic. There was a scar in the left lumbar region.

Roentgenographic Data.—An excretory urogram, made on Jan. 3, 1947, revealed the right kidney to be normal. Severe hydronephrosis on the left side and obstruction at the ureteropelvic juncture were present. An area of density, 1 by 2 cm., was seen in the roentgenogram. Observations were confirmed by a retrograde urogram February 8. The chest was normal.

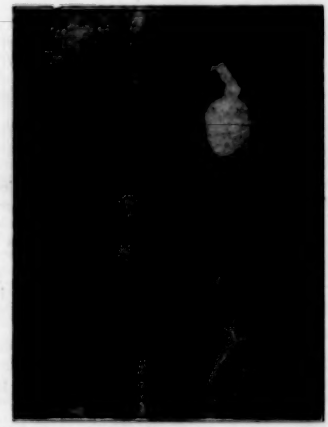

Fig. 3 (case 1).—Retrograde urogram prior to operation.

Laboratory Data.—Urinalysis revealed a specific gravity of 1.205 and a trace of albumin. Culture yielded A. aerogenes. Examination of the blood showed urea nitrogen, 8.6 mg., and sugar, 116 mg. per hundred cubic centimeters. Serum calcium was 10 mg. and serum phosphorus 4 mg. per hundred cubic centimeters.

Progress in Hospital.—Prior to operation the patient was treated with penicillin, 600,000 units in peanut oil daily, and 4 Gm. of sulfadiazine for five days.

Operation (January 25).—Nephropyelolithotomy was performed on the left side. A curved lumbar incision was made (left), removing the scar of the previous incision. The twelfth rib was resected subperiosteally. The kidney was densely adherent to the peritoneum and adjacent structures. Subcapsular delivery was accomplished. The pelvis was isolated, and an incision, 2.5 cm. in length, was made posteriorly. The pelvis was thick and fibrotic. The ureteropelvic juncture was moderately obstructed. A calculus of 1 by 2 cm. was removed from the pelvis. The ureteropelvic juncture was dilated. A nephrostomy drain with a ureteral splint was introduced through the middle calyx. The incision of the pelvis was closed, and the kidney was returned to its original position and the capsule sutured over the kidney. The wound was closed with no. 1 chromic surgical gut, with interrupted sutures. Roentgenographic examination was carried out at the operation to verify the fact that all stones had been removed.

Postoperative Course.—The postoperative course was uneventful. The nephrostomy drain was removed in three weeks. The patient was on sick leave for four weeks and returned to duty in eight weeks.

Remarks.—At the time of the patient's discharge from the hospital, the hydronephrosis was reduced in size and the obstruction at the ureteropelvic juncture was apparently relieved.

Fig. 4 (case 1).—Postoperative urogram. A radiopaque medium was injected through a nephrostomy tube.

CASE 2.—S. L. B., a white man aged 45, was admitted to the hospital Nov. 27, 1946, with hydronephrosis and a calculus in the left kidney, which had been observed at the separation center.

Fig. 5 (case 2).—Urogram made before operation, showing the calculus in the left kidney.

Previous History.—Nephrotomy for the removal of renal calculus was performed in June 1945. The patient complained of nagging pain in a costovertebral angle on the left side since that time.

Physical Examination.—No abnormalities were observed except for mild sensitivity in the left flank. There was a healed

scar on the left flank. His blood pressure was 118 systolic and 70 diastolic.

Roentgenograms.—Excretory and retrograde urograms demonstrated hydronephrosis on the left side. The roentgenogram showed an area of density, 1 cm. in diameter, in the inferior

Fig. 6 (case 2).—Retrograde urogram showing the calculus in the inferior hydrocalyx.

calyx of the left kidney. There was moderate obstruction at the ureteropelvic juncture. The right kidney was normal, and no significant thoracic observations were made.

Laboratory Observations.—Urinalysis revealed a specific gravity of 1.026. There was no trace of albumin or sugar, and

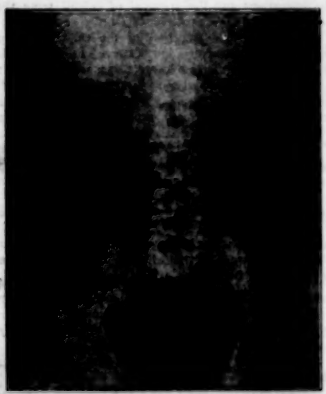

Fig. 7 (case 2).—Postoperative urogram; the calculus is not present.

microscopic observations were normal. The reaction to the Kahn serologic test for syphilis was negative. Studies of the chemistry of the blood showed urea nitrogen, 14 mg., and sugar, 133 mg. per hundred cubic centimeters. Other aspects of the blood were normal. B. proteus was cultured from the urine, from the bladder and from the left kidney. On cystoscopic examination, the p_H of the urine from the right kidney was 5.4 and from the left kidney it was 7.2. Serum phosphorus was 3.2 mg. and serum calcium 11.25 mg. per hundred cubic centimeters.

Progress in Hospital.—Preoperative treatment was with penicillin and sulfadiazine (chemotherapy), to eradicate the renal infection.

Operation.—A nephropyelolithotomy of the left kidney and the left ureter was done on Dec. 3, 1946. A curved lumbar incision was made, removing the scar of the previous operation. The twelfth rib was removed, and the peritoneum and renal fascia were exposed. There were dense adhesions of the kidney to the adjacent structures. The kidney was exposed by subcapsular incision, and the pelvis was isolated. The pelvis was moderately enlarged, and there was obstruction at the ureteropelvic juncture by anomalous vessels and bands. Incision was made at the posterior aspect of the pelvis, and a calculus was removed from the lower calyx. A nephrostomy drain and a ureteral catheter splint were introduced. The kidney was replaced in its normal position, and the capsule was approximated about the renal tissue. The wound was closed with an interrupted figure-of-eight suture. A cigaret drain to the renal pelvis was inserted. The postoperative course was uneventful.

Fig. 8 (case 2).—Postoperative excretory urogram; hydronephrosis persists.

The cigaret drain was removed on the sixth day, and the nephrostomy drain and the ureteral catheter splint were removed on the twenty-first day. The patient left the hospital at the end of the fourth week and returned to duty without disability.

Remarks.—Chemical analysis of the renal calculus revealed phosphates, calcium oxalate, magnesium and chemicals of the ammonium (NH_4) group. Roentgenologic examination was carried out at the time of operation to verify the fact that all the stones had been removed.

Case 3.—G. S., a white man aged 28, was admitted to the hospital with a history of the onset of bilateral renal colic in 1941. There was spontaneous passage of a calculus in the left kidney. Spontaneous passage of calculi in both kidneys occurred in 1942 and again in 1944. A calculus was removed from the right kidney by operation in 1945. His previous history was not remarkable.

Physical Examination.—Physical examination disclosed tenderness over the right kidney. His blood pressure was 120 systolic and 90 diastolic.

Roentgenograms.—A retrograde urogram showed seven fairly large calculi in the right kidney, in the superior and inferior calyces and in the pelvis. There was moderate hydronephrosis. The left kidney appeared normal. The chest was also normal.

Laboratory Observations.—The urine had a specific gravity

of 1.016. There was a trace of albumin, but no sugar. Ps. aeruginosa and B. proteus were cultured from the urine. Urea nitrogen in the blood was 15 mg., serum phosphorus 3.7 mg. and serum calcium 10.5 mg. per hundred cubic centimeters. The remaining observations of the blood were within normal range. The Kahn serologic reaction was negative.

Progress in Hospital.—The patient was treated preoperatively with penicillin and sulfonamide drugs for ten days, to eliminate the renal infection. On Jan. 27, 1947, a nephrolithotomy of the right subcapsular region was performed. A curved lumbar incision, 20 cm. in length, was made, removing the scar of the previous operation and exposing the renal fascia. The twelfth rib was removed. The kidney was densely adherent to the adjacent structure. The incision was made through the renal fascia and the capsule of the kidney. Subcapsular exposure was carried out. A rubber-covered clamp was applied to the pedicle to control hemorrhage. Nephrotomy incisions were made in the superior and inferior poles, and the calculi were removed. Oxidized cellulose gauze was placed in the nephrotomy incisions, and closure was accomplished with mattress sutures through the kidney, renal fascia and capsule. A nephrostomy drain through the inferior calyx and a ureteral catheter splint were placed in position. A cigaret drain to the renal fossa was inserted. The postoperative course was uneventful. The cigaret drain was removed on the seventh day. The nephrostomy drain and the ureteral catheter splint were removed on the twenty-first day. The wound healed, and the patient was able to leave the hospital during the fifth week. Chemical analysis of the stones showed calcium phosphates, oxalates and ammonia.

Remarks.—Roentgenologic examination was carried out at operation to verify the fact that all stones had been removed.

CASE 4.—O. K. M., a white woman aged 53, had an operation for the removal of stones in the region of the left kidney in September 1945. She experienced sudden severe pain in July 1946, after a long automobile ride. Stones were observed in the left kidney in August. Her previous history was noncontributory.

Physical Examination.—Observations in the physical examination were not remarkable. Her blood pressure was 118 systolic and 70 diastolic.

Roentgenologic Data.—The chest was normal. A retrograde urogram showed a normal right kidney, moderate hydronephrosis, two large laminated calculi in the left kidney and ureteral constriction at the ureteropelvic juncture.

Laboratory Data.—There was no albumin or sugar in the urine. Observations of the blood were not remarkable. The Kahn serologic reaction was negative. The blood urea nitrogen was 16 mg. and sugar 97 mg. per hundred cubic centimeters. The serum phosphorus was 4.4 mg. and serum calcium 12.6 mg. per hundred cubic centimeters. E. coli and Ps. aeruginosa were cultured from the urine. In the test of renal function with phenolsulfonphthalein the results were: appearance time five minutes, 60 per cent in thirty minutes and 20 per cent in one hour, for a total of 80 per cent. Cystoscopy revealed a p_H of 5.5 in the right kidney and 7.6 in the left kidney.

Operation.—A nephropyelolithotomy was performed December 5. A curved lumbar incision, 20 cm. in length, was made, beginning above the level of the twelfth rib, 5 cm. lateral to the spine and extending downward and forward. The scar of the previous operation was removed. The kidney was densely adherent to the peritoneum and the adjacent structure. The incision was made through the renal fascia and the capsule, and the kidney was exposed subcapsularly. Hemorrhage was controlled with a rubber-covered clamp to the pedicle. A nephrotomy and a pelvic incision were made, and two large calculi were removed. A no. 12 bulb was passed through the ureteropelvic juncture to estimate the degree of ureteral obstruction. Anomalous vessels and bands were removed at the ureteropelvic juncture. A de Pezzer catheter with a ureteral splint was introduced through the lower calyx. The kidney was placed into original position with triangular sutures at the posterior surface. A cigaret drain to the renal area was inserted. The wound was closed with no. 1 chromic surgical gut, with interrupted sutures. Roentgenologic examination was used at operation to verify the complete removal of the calculi. The postoperative course was uneventful. The cigaret drain was removed on the sixth day, and the nephrostomy drain and ureteral splint were removed after two weeks. The patient was discharged from the hospital on the twenty-first day after operation.

Remarks.—The patient was treated with sulfadiazine and penicillin postoperatively, to limit infection. Roentgenologic examination was carried out at operation to verify the fact that all stones had been removed.

CASE 5.—S. E. R., a white man aged 41, was admitted to the hospital, with a history of the onset of his present illness on July 18, 1944, when he passed three small stones from the bladder without pain. A roentgenogram on July 22 showed calculi of the left kidney. On August 4, a nephrolithotomy was performed, with the removal of a large number of calculi from the left kidney. On Aug. 31, 1945, a roentgenogram showed the recurrence of calculi in the left kidney. Gross hematuria developed on March 14, 1946, with colic in the left kidney and fever. Several small stones were passed. On November 18, a roentgenogram showed multiple calculi of the left kidney. The patient was transferred to Walter Reed General Hospital December 9.

Physical Examination.—Observations in the physical examination were not remarkable.

Roentgenologic Data.—The chest was normal. An excretory urogram indicated a large group of stones, 2 cm. in diameter, in the lower pole of the left kidney, just distal to and included in the caudal calyx. There was moderate hydronephrosis, and the superior and middle calyces were clubbed. The right kidney was normal.

Laboratory Observations.—Urinalysis revealed a specific gravity of 1.017 and no trace of albumin or sugar. Observations of the blood were not remarkable. The blood urea nitrogen was 12 mg. per hundred cubic centimeters. The Kahn serologic reaction was negative. Culture yielded Ps. aeruginosa and A. aerogenes. Tests for sensitivity to streptomycin were carried out. The serum calcium and serum phosphorus were within normal range.

Progress in Hospital.—The patient was treated with streptomycin until the urine culture was negative.

Operation (Jan. 14, 1947).—Because the patient had had two previous operations for the removal of calculi from the lower calyx and because the calculi involved the renal tissue of the lower pole, subcapsular resection of the calyces was planned. The kidney was exposed through a curved lumbar incision; the capsule was divided, and the lower calyx was resected and the calculi removed. Hemorrhage was controlled by suturing the large vessel and approximating the renal tissue over oxidized cellulose gauze, with mattress sutures through the tough capsule. A nephrostomy drain was inserted and the wound closed. The postoperative course was uneventful. Irrigation through the nephrostomy tube with solution "G" was begun on the third day. The nephrostomy drain was removed at the end of the third week, after roentgenograms and a urogram showed that the stone was absent and the condition of the renal pelvis was good. The infection recurred during the fourth week and was cleared again with streptomycin. The patient's recovery was uneventful, and he was discharged from the hospital in the fifth week after operation.

Remarks.—Because multiple small calculi were incorporated in the renal tissue, it is believed that removal of these stones, leaving a damaged kidney, would have been followed by recurrence of the calculi. Roentgenologic examination was carried out at the operation to verify the fact that all stones had been removed.

SUMMARY AND CONCLUSIONS

The incidence, causation and treatment of recurrent renal calculi, complicating recumbency of patients with war wounds, is discussed, and the operative technic is described. On account of previous renal operation, the kidneys in patients with renal calculi are adherent to the adjacent structure, making exposure difficult. The subcapsular approach reduces to a minimum the

damage to the kidney and adjacent organs and is the operative procedure of choice in these cases.

Reports of cases are included. Postoperative follow-up is emphasized.

The operative treatment of renal calculi is but a phase in the management of this disease, and the proper postoperative regimen is essential for the prevention of recurrence.

ANALYSIS OF TWO HUNDRED CASES OF URINARY CALCULI

With Particular Reference to Methods of Management of Ureteral Stones

HAMILTON W. McKAY, M.D.
H. HAYNES BAIRD, M.D.
and
KENNETH LYNCH JR., M.D.
CHARLOTTE, N. C.

In this paper no attempt has been made to review the literature, because such a review would not be in keeping with the title nor would time permit.

In 200 patients with urinary calculi there were seventy-seven renal stones, twenty in the upper part of the ureter, eleven in the middle part of the ureter, ninety in the lower part of the ureter and ten in the bladder; there were 4 patients with bilateral ureteral calculi and 12 with bilateral renal calculi.[1] The mortality rate was 0.5 per cent. This classification is based on the fact that the stones were located at the anatomic positions mentioned when we had to offer a solution to the patient's problem. It is obvious that many of these stones had previously been located at other points in the urinary tract.

The accompanying table offers the most practical solution to the problem of presenting a concise analysis of the ureteral stones in this series of cases.

Analysis of Cases

Location of Stones	Average Hospital Stay, Days	Percentage of Cases	Percentage of Morbidity (Obtlle and Fever)
Upper part of ureter (20 cases)			
Operative	17	70	57
Operative cystoscopy *	9	30	33⅓
Middle part of ureter (11 cases)			
Operative	13.5	64	70
Operative cystoscopy	14.5	36	50
Lower part of ureter (90 cases) †			
Operative ‡	16	24.4	54.8
Operative	cystoscopy	7.3	75.6	41

* This term is used in lieu of cystoscopic manipulation as the latter term does not indicate ureteral meatotomy and extraction of stones.

† There was epididymitis in 1 per cent.

‡ In 3 per cent of cases the ureter was perforated with instruments, and in 2 per cent there was prostatic abscess.

The operative approach to lower ureteral stones, with the percentage of cases involved, was as follows:

Lower quadrant	65%
Transvesical	25%
Vaginal	10%

The chemicals observed in the stones, in order of frequency, are as follows:[2] (1) calcium carbonate, (2) calcium phosphate, (3) urates, (4) mixtures of calcium carbonate, calcium phosphate and urates, and (5) oxalate (rare).

The greatest difficulties were encountered with small rough stones in the terminal aspect of the ureter. Urologists are aware of the many complications, which usually occur in the following order: pyelonephritis, prostatic abscess, septicemia and, occasionally, perforation of the ureter if operative cystoscopy is the method of choice. On the other hand, if one decides to do an open operation, the stone may be difficult to locate. Encountering the aforementioned difficulties many times has enabled us to devise a new technic for open removal of the type of stones previously mentioned.

After one decides that an open operation would be advisable for small rough stones in the terminal aspect of the ureter, a no. 4 or no. 5 catheter is passed by the stone and a bougie is tied to the end of the catheter

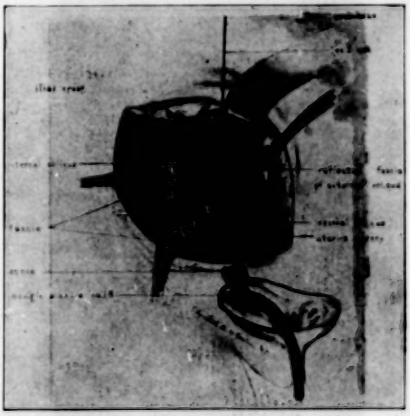

Fig. 1.—A new technic for open removal of stones in the terminal ureter is shown. By pulling upward on the silk, which is attached to the bougie, the ureter is brought up to a more accessible position and is straightened, which facilitates the removal of the stones.

with a piece of no. 1 silk, about 10 inches (about 25 cm.) long. The perineum and genitalia having previously been prepared as a sterile field, the bougie is passed into the bladder and the end of the ureteral catheter is covered with sterile towels. Through a Gibson incision, the lower aspect of the ureter is exposed and opened above the point where the uterine artery crosses the ureter in women or a similar point in men. The ureteral catheter is then pulled through the ureterotomy incision and detached from the silk. At this point the bougie fits over the ureteral orifice. By gentle traction on the silk, the lower aspect of the ureter is not only brought up to a more accessible place but, instead of forming a curve with the bow outward, the ureter is now straight. As a result of these two factors one can extract the stone with little trauma. It should be emphasized that operation for stones in the lower part of the ureter is made easier and one is less apt to open the peritoneum if the fascia covering the ureter is incised with a scalpel down to the outer coat of the ureter. Also, the fascia which is continuous with the peritoneum is dense at the point where the ureter crosses

From the Urological Service of Drs. McKay, McKay and Baird, Memorial Hospital, Charlotte, N.C. Dr. Lynch is resident in urology at this hospital.

Read before the Section on Urology at the Ninety-Sixth Annual Session of the American Medical Association, Atlantic City, N. J., June 13, 1947.

1. Discrepancies in total figures are due to the fact that there were stones in more than one location in several cases.

2. Personal communication to the authors from Dr. Walter Summerville, Summerville and Byrnes Laboratories, Charlotte, N. C.

the iliac vessels and just behind the bladder; sharp dissection at these points is desirable (fig. 1).

REPORT OF CASES

CASE 1.—Mrs. R. O. K. (fig. 2) was first seen on Jan. 8, 1947 with a history of colic in the left kidney side ten days previously, followed by three attacks. Otherwise her past medical history was noncontributory. General physical examination revealed no abnormalities. Urinalysis revealed microscopic traces of blood, with occasional white blood cells. Cystoscopy revealed an impassable obstruction in the lower part of the left ureter, and a roentgenogram revealed an opaque shadow, 6 by 4 mm., in the region of the obstruction. With the patient under "pentothal sodium" (sodium 5 — ethyl 25 — [1 — methyl-butyl] thiharbiturate) anesthesia, the second attempt at passing a no. 4 ureteral catheter to the left kidney was successful, and the catheter was left in place for three days. During the next three days, two attempts on different days, with spinal anesthesia, were made by each of us to pass another catheter up the left side, without success. On the last attempt, the catheter, which had been in place for six days, was pulled halfway

Fig. 2 (case 1).—Small rough stone in the ureter, which did not respond to dilatation and which was removed with the new technic presented.

down the ureter and could not be passed back to the kidney.

We then decided to remove the stone, using the procedure previously outlined, as the ureter was now completely blocked and ureteral obstruction, in addition to the stone, was present. This method was successfully carried out, with the removal of a 6 by 4 mm. rough stone, and a decided narrowing of the ureter at the point where the stone had stopped was observed. The diminution in caliber at this point was due to periureteral fibrosis, which was cut parallel with the ureter, and the lumen then dilated so that it would admit a no. 14 urethral catheter. The postoperative course was uneventful, and the patient was discharged nineteen days after admission in good condition. Two months after the operation, cystoscopy was performed and a no. 8 ureteral catheter was passed, without any obstruction, to the left kidney.

Comment.—The method outlined for dealing with small rough stones in the lower part of the ureter has certain advantages, particularly if ureteral stricture or undue angulation of the ureter is present. If too vigorous attempts are made to remove such stones with the stone baskets, the end result of such trauma may be more disastrous than the original disease. If the ureter is perforated above the point of obstruction, without effecting free drainage, decided fibrosis results. This occurred in a case similar to the one just reported. On the other hand, conservative or expectant treatment often results in multiple hospital admissions with pyelonephritis; or if patients with this disease do not have pain, they may not return and a hydronephrotic sac or pyonephrosis might develop.

The transvesical or intravesical approach to impacted stones in the intramural part of the ureter or just back of the bladder is of considerable value at times. In making such an approach it is of importance that the perivesical fascia be cut just above the symphysis transversely, so that the space of Retzius is not entered. The peritoneum is then reflected off the bladder, so that the region of the ureter on the side of the stone can be palpated; this ureter does not have to be exposed. An incision is then made in the bladder, so that a ureteral meatotomy can be done on top of a grooved director. At this point, the operator's left hand is

Fig. 3 (case 2).—Large stone in the terminal aspect of the ureter, which was removed via transvesical approach.

placed behind the bladder, in the region of the lower aspect of the ureter, and pressure is exerted on the ureter and the bladder, to prevent the stone from slipping upward. Using the right hand, the stone can easily be extracted with a curved hemostat. Under favorable conditions, this procedure is accompanied with little shock and there is less disturbance of normal functioning.

CASE 2.—J. K. D. (fig. 3), aged 66, was first seen on July 29, 1946, because of increasing symptoms of prostatism for one year, with complete urinary retention on two occasions and intermittent colic of the right kidney for three or four years. The remainder of his history was noncontributory.

Physical examination revealed an old man who was in considerable distress, but whose appearance was in accordance with his stated age. There was evidence of hypertensive cardiovascular disease (his blood pressure was 170 systolic and 120 diastolic). Rectal examination revealed a grade 1 benign enlargement of the prostate. The residual urine averaged 220 cc.

Laboratory Examination.—Blood cell counts were normal. The urine contained a few red blood cells and white blood cells. Roentgenograms and cystoscopy revealed an impacted stone (1 by 0.5 cm.) about 1.5 cm. from the right ureteral orifice. A transvesical approach to the stone in the lower part of the right ureter was carried out, and a right angle de Pezzer catheter was

left in place suprapubically for seven days. A suprapubic prostatectomy was done, and no hemostatic agents were used in the prostatic bed. A Freyer tube was left in the bladder for twenty-four hours and then removed. The patient's postoperative course was uneventful, and he was discharged after seventeen days in the hospital, voiding freely and without any residual urine. The suprapubic sinus had ceased to drain four days prior to discharge. The red blood cell count and the hemoglobin were essentially the same on discharge as on admission.

Comment.—In this case with two entities, the transvesical approach to the stone (1 by 1.5 cm.) seemed logical, because the stone was impacted 1.5 cm. from the ureteral orifice. After the stone was removed, the first stage of the suprapubic prostatectomy had been completed; thus, it was a two in one operation. If a retrovesical approach to this stone had been performed, the trauma would have been increased. Incidentally, no hemostatic agents were used in the prostatic bed following the enucleation, and the red blood cell count and the hemoglobin were essentially the same on discharge as on admission.

Fig. 4 (case 3).—Urogram (intravenous) showing stones in the lower part of each ureter and a nonfunctioning kidney with stones on the right side and good function on the left. The stone on the left side was removed extravesically, and the one on the right was removed transvesically.

Case 3.—G. H. (fig. 4), aged 59, was admitted to the urologic service with a history of complete urinary retention, chills and fever prior to admission. Also, the patient had noticed that his urine was foul smelling and had the appearance of pus.

The patient had previously been immobilized on the orthopedic service for several months, at intervals over a period of years **In 1908 the patient had chronic osteomyelitis of the left knee, which necessitated his spending one year in bed, and in 1937 he had a pathologic fracture of the upper part of the left leg, which would not heal and which necessitated amputation. Again in 1945, the patient was immobilized for several months because of an injury of the back. Otherwise, his past history was noncontributory.**

Physical examination revealed the man to be somewhat lethargic, appearing much older than his stated age. There was evidence of generalized arteriosclerosis and hypertensive cardiovascular disease without failure. The left leg had been amputated at the middle of the thigh. Rectal examination was nonrevealing. The urine contained equal parts of sediment and liquid, with many white blood cells. Culture revealed Staphylococcus aureus. The blood cell counts showed 10,750 white blood cells and 61 mg. of nonprotein nitrogen per hundred cubic centimeters. The blood was otherwise normal.

Urograms revealed no function on the right side, with multiple stones in the lower pole of the kidney and a 12 mm. stone in the lower part of the right ureter. A hydroureter with pyelectasis was present on the left, with an 8 mm. stone in the lower part of the ureter.

Cystoscopy revealed the neck of the bladder to be normal and the stone on the right to be 1.5 cm. from the ureteral orifice, while the stone on the left was about 4.5 cm. from the ureteral orifice. The stones in the lower part of both ureters were approached through a midline incision. As the left kidney was functioning in contrast to nonfunctioning pyonephrosis on the right side, the lower part of the left ureter was mobilized first and the stone removed through a ureterotomy incision. This side was then drained and packed off, and the stone on the right was removed via the transvesical route described previously.

Fig. 5 (case 4).—The stone is engaged in the basket; it was removed after traction was applied for two days.

The patient's postoperative course was uneventful except for three days of low grade fever. He was discharged with office follow-up planned, on the twenty-first postoperative day, with the incision healed but with grossly purulent urine. Two months after discharge the urine was grossly clear, so that he returned to the hospital for further study. A cystogram revealed no ureteral reflux on the right, and cystoscopy showed the ureteral orifice to be normal. Urograms revealed no function on the right and no abnormality on the left side. A retrograde pyelogram of the right kidney revealed little parenchyma, with small calculi in the lower calyx. Due to the fact of poor operative risk and because the patient has remained asymptomatic and clinically well for a year, nephrectomy on the right side has not been advised.

Comment.—A transvesical approach to the right ureteral stone was technically the easiest operation that could be performed, as the stone was about 1.5 cm. from the orifice and the long-standing periureteritis of the entire right ureter would have made the retrovesical approach difficult. Cystostomy drainage of the purulent material from the right kidney was more desirable than drainage from an opening in the ureter just behind the bladder.

Why this patient had urinary retention is still puzzling, unless the decided cystitis and large particles of pus and debris from the right kidney account for the retention. In the average case a nephrectomy on the

right side would have been done, but this case is illustrative of the advantage of free drainage when a kidney is practically destroyed. The function of the right kidney does not help this patient sustain life, but with such a poor operative risk a nephrectomy could be fatal.

Urologists have certain criteria for the open or closed method of removal of ureteral stones, but it is difficult to find these indications enumerated in a concise manner in the literature. The reason for the paucity of such articles is probably that each case necessitates a decision based on individual factors. Nevertheless, a knowledge of the following facts has been of considerable value to us in arriving at a decision as to which method to use in each case.

1. Location in the ureter
2. Size and contour of the stone
3. Size of the ureter and amenability to dilatation, e. g., pregnancy and postpartum state
4. Bilateral ureteral stones
5. Ability to change the axis of the stone
6. Ability to pass a catheter by the stone
7. Condition of the kidney above the stone
8. Temperament of the patient (some patients fail to tolerate ureteral catheters)
9. Ability to obtain free drainage after the removal of the stone by operative cystoscopy
10. Ureteral disease, including strictures and undue angulations of the ureter
11. Disease of the bladder, e. g., strictures of the urethra, epididymitis, fulminating cystitis and enlarged prostate in men

Case 4.—H. H. B. (fig. 5), aged 52, was admitted to the hospital on Oct. 17, 1944, with colic of the right kidney. Since the age of 20, this patient had been having attacks of renal colic on both sides and had passed several small stones. Otherwise, his history was noncontributory. Physical examination revealed a well developed 52 year old white man, without any abnormal observations.

Urinalysis revealed a few red blood cells and white blood cells and amorphous phosphates. Nonhemolytic Staph. aureus and streptococci were cultured from the urine. The calcium in the blood was 10.6 mg. per hundred cubic centimeters (checked).

A roentgenogram of the kidneys, ureters and bladder revealed an 8 mm. stone in the lower part of the right ureter and a 5 mm. stone in the upper part of the left ureter, with a similar one in the middle part of the left ureter. Urograms revealed a double pelvis in the right kidney.

A meatotomy of the right ureter was done; the ureter was dilated with a catheter for three days, and another cystoscopy was done, with an unsuccessful attempt at dislodging the stone. After the second cystoscopy the patient had chills and fever for nine days, during which time the temperature ranged as high as 105 F. Blood cultures were consistently negative. During the patient's entire hospital stay, he received penicillin and, for a part of the time, sulfadiazine, with a resultant level in the blood of 12 mg. per hundred cubic centimeters. Six days after the ureteral meatotomy, the stone was engaged in a basket and traction was exerted after the method of Ockerblad, by placing a rubber band on the end of the basket and leaving it for two days. After two days of traction cystoscopy was performed for the fourth time and the stone pulled into the bladder, but, because of the size, it had to be crushed for removal from the bladder.

The patient was discharged on the fourteenth hospital day, in apparently good condition, and readmitted two weeks later, with chills, fever, nausea and vomiting, symptoms which had returned one week after his discharge. Apparently the patient had urinary sepsis, which quickly responded to treatment with penicillin and intravenous injections of dextrose. He was discharged three days after admission. The patient was seen one month after discharge, in excellent condition. He was advised to have the stones removed from the left ureter, but he has not been seen since.

Comment.—The patient would probably have had a less stormy convalescence and less permanent renal damage if this stone had been removed by open operation. The urine was infected with Staph. aureus and streptococci. At the time of his admission to the hospital and during the six days of manipulation of the stone, there was practically no drainage from the kidney. Free drainage of infected urine could have been obtained by open operation, thus minimizing the possibility of pyelonephritis and more nearly approaching normal function. The presence of two stones in the left ureter was the factor which persuaded us to use operative cystoscopy on the right side, but, in retrospect, it would seem that it should have been a discouraging factor.

Case 5.—Mrs. V. C. (fig. 6), aged 43, was first seen on March 13, 1945, with a history of attacks of renal colic on the left side for several months, associated with chills and fever but otherwise not remarkable. The past history was noncontributory except for the removal of a stone from the right kidney three years previously. The results of the physical examination were within normal limits.

Urinalysis revealed a few red blood cells and white blood cells. Hemolytic Staph. aureus was cultured from the urine. The calcium in the blood was 10.3 mg. per hundred cubic centimeters.

Fig. 6 (case 5).—A roentgenogram of the kidneys, ureters and bladder, showing a large stone in the terminal aspect of the ureter, with a catheter dilating the ureter. The stone was removed by applying digital pressure via the vagina.

Urograms revealed a bifid pelvis on the right side and a double pelvis with a complete double ureter, without hydronephrosis, on the left, with a huge stone, as shown in figure 6, in the lower part of the left ureter.

Under spinal anesthesia a meatotomy was done on the left ureter. The orifice was visualised, and, with digital pressure via the vagina, the stone was pushed into the bladder. The stone was so large that it had to be crushed before removal from the bladder. The patient's postoperative course was uneventful, and she was discharged on the fifth hospital day. Subsequent follow-up in the office for one month was uneventful.

Comment.—After observing a case in which so large a stone was removed by operative cystoscopy, one could doubt that the size of the stone was a factor in the decision as to whether or not an open operation should be done in the lower part of the ureter for stones. In favor of operative cystoscopy, the stone was round and smooth, so that it could be pushed out of the ureter with a finger in the vagina, without the use of metal instruments in the ureter. If metal instruments had been used in the ureter in this patient, followed by edema with the resultant stasis in the presence of hemolytic Staph. aureus, the postoperative course would have

been, in all probability, similar to that of H. H. B. Free drainage following removal is important. In removal of large smooth stones by operative cystoscopy from the terminal aspect of the ureter, downward digital pressure via the vagina in women or the rectum in men is at times a valuable adjunct.

SUMMARY

Two hundred patients with urinary calculi were observed during the past three years, with a mortality rate of 0.5 per cent. The cases are analyzed and classified according to the location of the stones. The cases in which there were ureteral stones are analyzed from the following standpoints: methods of removal of stones, average days in the hospital, percentage of stones removed by open operation and operative cystoscopy and complications. A new method for open removal of small rough stones from the terminal aspect of the ureter is presented, with an illustrative case. The transvesical approach to stones in the terminal aspect of the ureter is discussed, and illustrative cases are presented. Factors which enable one to decide on the method for removal of ureteral stones are listed, accompanied with reports of illustrative cases.

ABSTRACT OF DISCUSSION

OF PAPERS BY DRS. MCKAY, BAIRD, LYNCH AND COLONEL KIMBROUGH, MAJOR FURST

DR. A. E. GOLDSTEIN, Baltimore: In the analysis of the management of urinary calculi, Drs. McKay, Baird and Lynch held to no conventional procedure, and rightfully so, as each case or group of cases requires a different procedure. Of 125 patients with ureteral stones, the authors performed an open operation in about one third; half of the operations were in the lower part of the ureter. This is approximately what is done in most of the larger clinics. At the Sinai Hospital in Baltimore, my colleagues and I have, for the past few years, gradually increased the percentage of open operative procedures for ureteral stones. Our feeling is that a patient with a calculus the diameter of which is over 0.5 cm., particularly if it is rough and irregular in shape, will have a difficult time in passing it or in having it removed with one of the various ureteral instruments employed, not that larger calculi have not been removed or passed. If we fail after two attempts, an open operation is suggested. The delay in gradually dilating a ureter over a period of several weeks or the trauma produced by the introduction of the various stone removing instruments, with occasional perforation of the ureter, is far more damaging to a ureter or a kidney than simple exposure of the ureter and removal of the calculus. I am in accord with their belief about open operations and am certain that more open ureterolithotomies will be done. Our experience with the various stone removing devices has not been good. In a recent case a Council stone remover was passed up a ureter and the stone engaged, and the instrument with the stone remained caught in the intramural portion of the ureter. Gradual traction brought the instrument, the stone and a large portion of the ureteral mucosa into the bladder, which led to stricture, a ureterocele and, ultimately, nephrectomy. In analyzing the percentage of patients that suffer some morbidity (40 per cent) following the removal of ureteral calculi by cystoscopic methods, one feels that some of the patients would have fared better if an open operation had been performed. However, I should like some enlightenment from the authors as to the reason for the morbidity (60 per cent) suffered by the patients who had an open operation. Open operative procedures at Sinai Hospital are rarely accompanied with any morbidity. A new technic for handling some of the calculi in the lower third of the ureter has been devised. We have been rather fortunate and have not encountered any difficulty in locating ureteral stones with an open operation; but should we encounter difficulty, we shall employ the method suggested by the authors.

DR. FRANK C. HANM, Brooklyn: In a recent survey of 255 cases of ureteral stone, my colleagues and I found a history of previous calculi in 29 per cent. It is the principal cause of death in spinal injuries with paraplegia; of 42 cases observed during the war, 2 deaths occurred, both from recurrent bilateral renal stone, accompanied with obstruction and urosepsis. The prevention of recurrence in the paralyzed patient deserves special consideration. During recumbency, there is a rapid mobilization of calcium from the bones, resulting in a high level of urinary excretion, lasting for from two to three months or more. The curve of urinary calcium excretion then gradually falls and may slowly return to a normal quantity, or it may level off on a plateau that is considerably above the normal level. Stasis is a natural corollary of recumbency. Because of inactivity, crystals and pieces of epithelium, which would ordinarily be excreted in the urine, tend to collect in the dependent calyces. These particles remain to provide a nidus in which calcium is readily precipitated from the supersaturated urine. Mobilization is indicated at the earliest moment. Turning these patients every two hours is not enough; they must be gotten out of bed into an upright position. Careful attention to nutrition is important. Most of these patients have a diminished blood protein content, with a reversal of the albumin-globulin ratio. A diet with a high level of protein and adequate mineral and vitamin content is required. Large doses of vitamin D should be avoided, as this may increase the excretion of calcium. The acid ash diet is not employed without specific indications, and a check of the urinary calcium excretion should be made, as in many instances the excretion of urinary calcium is increased during the use of the acid ash diet. Stasis provides the ideal groundwork for infection, which almost always develops. Infection is also introduced by catheterization, which is so often necessary in the management of this condition. The urea splitting organisms are the most dangerous and are more difficult to eliminate. Weekly examination of the urine for evidence of infection and a roentgenogram once a month, for evidence of calculary shadows, are helpful and necessary procedures. Colonel Kimbrough emphasized the care that must be taken at the time of operation to prevent the recurrence of calculi. All of the calculus must be removed, and the use of roentgen rays at operation is routine. Predisposing obstructive factors should be corrected. The relief of ureteropelvic obstruction or the resection of a bottleneck calyx are the procedures commonly employed. Careful postoperative follow-ups are indicated to eliminate all infection.

DR. HENRY SANGREE, Philadelphia: Colonel Kimbrough and Major Furst are to be congratulated on their presentation and the carefully made follow-up of their large series of patients. It is more difficult in civilian practice to follow cases for recurrent calculi. In a recent series of 50 cases of renal and ureteral calculi, the recurrence was 14 per cent. This is lower than many investigators report. Crabtree had considerably over 50 per cent. Recurrent calculi may be divided into two types: true recurrence, the formation of another stone after complete removal of the calculus, and false recurrence, or fragments or small calculi remaining after operative removal. Three major causes can usually be investigated: (1) culture of the urine to show infection, especially of urea splitting organisms, and a search for foci of infection, (2) analysis of the stone, of which chemical examination and roentgen ray crystallography present the most accurate determination of composition, (3) search for endocrine disturbances causing the formation of calculi, especially hyperparathyroidism. In our surgical methods of prevention at the time of operation, my colleagues and I look for bands and anomalous vessels, which occur in 30 per cent of our patients, and for nephroptosis, moderate or severe, which is seen in 28 per cent of our patients. The former is corrected by excision and the latter by nephropexy. Large calculi, usually associated with infection, are more apt to cause recurrent stones than small calculi, which are less likely to harbor infection and which cause a smaller amount of renal damage. Fluoroscopy and examination with roentgen rays in the operating room help to eliminate many false recurrences of stone by showing the presence of small stones and the persistence of fragments. Prevention of renal calculi is important.

Urostasis should be corrected; antiseptic drugs may be used, especially methenamine, neoarsphenamine and penicillin, to effect a shift in the reaction of the urine.

DR. GEORGE R. LIVERMORE, Memphis, Tenn.: I wish to discuss two points in Drs. McKay, Baird and Lynch's paper. First, as the inventor of one of the metal instruments for the removal of stones in the ureter, I wish to go on record as condemning them; they are dangerous and their use may result in damage or puncture of the ureter. Many urologists have had the same experience that Dr. Goldstein mentioned and that Dr. McKay reported. I feel that cystoscopic manipulation of ureteral stones should be limited to the use of ureteral catheters and flexible bougies. I agree with Dr. Goldstein that one should be gentle in the introduction of any instrument, as prolonged punching with catheters and bougies about the stone is apt to produce injury to the ureter, with resulting formation of cicatricial tissue and stricture of the ureter. I have seen cases in which this has occurred. Second, when to operate depends on the condition of the patient and the best judgment of the operator. If one can pass a catheter beyond the stone and establish drainage and if the kidney is not severely damaged or it improves with drainage, one can afford to wait. If however, the stone is impacted and one cannot succeed in passing a catheter beyond it, it would be well to remove the stone by operation as soon as is feasible.

CLOSING DISCUSSION

DR. HAMILTON W. MCKAY, Charlotte, N. C.: Reference has been made in this paper to the frequent occurrence of stone in persons in the Carolinas. A few years ago, one of the medical directors of one of the leading life insurance companies noted that there were many rejections of applicants from the Piedmont area of the Carolinas because of urinary lithiasis. He made an investigation and found that formation of calculi in persons in this section was five times as frequent as it was in the remainder of the United States. I have not been able to verify this statement. Nevertheless, when one considers that this series of 200 cases in a three year period represents one service of a hospital of four hundred beds; not connected with a medical school, with three urologists on that service and five other full time urologists practicing in the hospital, 200 cases of stones is a tremendous incidence. We have reviewed the 200 cases with the following points in view: 1. Certain criteria must be applied to the patient after study of his disease to determine which patient should be operated on and which patient should be treated by operative cystoscopy. In several cases we have failed because the case was not individualized. 2. We have had difficulty in open removal of some stones in the lower part of the ureter, and for this reason we have presented a technic, devised by us, which gives one better control of the lower part of the ureter, with less trauma and greater ease in removal of such stones than is true with other technics. This is done by lifting the trigone of the bladder and the lower part of the ureter up into the wound and at the same time straightening the lower part of the ureter, as described. 3. Over 50 per cent of the patients have had a prolonged stay in the hospital because of complications, such as infections of the blood stream, urinary sepsis without infection of the blood stream, prostatic abscesses or other complications. We do not believe that this should have occurred, and we are taking steps now to correct it. At the present time we believe that after the patient has been properly studied and the ureteral stone located, if there is a question as to which method should be used, an open operation should be the method of choice. Our patients are usually out of bed the second or third postoperative day, with a less stormy convalescence than is the case with other technics. Dr. Goldstein raised the point of 50 per cent of complications from infection in open operation. The manipulation which most of these patients had experienced before open operation was done was responsible for this occurrence.

COLONEL J. C. KIMBROUGH, Washington, D. C.: I was especially interested in what Dr. Hamm said. He criticized my not encouraging the patients to exercise; movement every two hours was not enough, I agree with him. I did not include much of that aspect of treatment in the paper because of concentration on the operative technic of removing recurrent calculi. Since the last war rehabilitation service has been instituted in army hospitals, veterans hospitals and probably civilian institutions. It has now been incorporated in army hospitals on a service level and is called the Service of Physical Medicine. There are elaborate systems of exercises to prevent calculus and to remove calculus. The patient with a ureteral calculus is instructed as to which movement will make the calculus pass and which movement will keep it in. We used this technic, and in certain selected cases it seemed to give reasonable results. Dr. Bransford Lewis employed what he called succussion to remove stones, in which he actually shook the stones out of the patient. If the stone had lodged in the lower calyx on the right side, he laid the patient on his left side, took him by the feet and shook him one way until the stone passed into the pelvis, then he stood him on his feet and shook him the other way until it passed into the bladder. We are having just about as much success at that as Dr. Bransford Lewis had.

DIAGNOSIS OF HEPATITIS BY HISTOLOGIC AND FUNCTIONAL LABORATORY METHODS

HANS POPPER, M. D. Ph. D.
and
MURRAY FRANKLIN, M. D.
Chicago

The differential diagnosis of acute hepatitis involves the separation of (1) acute damage of the hepatic parenchyma from other diseases simulating it, especially in the absence of jaundice, and (2) the different forms of acute parenchymal disease from one another. The latter may be either inflammatory or degenerative in nature. In the liver more so than in any other parenchymal organ, these two basic pathologic phenomena can be differentiated only with extreme difficulty. For practical reasons it is, therefore, preferred to call acute parenchymal disease of the liver "hepatitis."

The identification of acute hepatitis without jaundice has become important in view of the recently described infectious form[1] which is demonstrated by laboratory procedures, such as determination of sulfobromophthalein sodium retention, cephalin-cholesterol flocculation, thymol turbidity and elevated excretion of urinary urobilinogen. In some instances pathologic changes have been found in biopsy specimens. Damage to the liver without jaundice due to industrial poisons can be shown by similar procedures. In addition, the urinary excretion of bilirubin has been emphasized.[2]

Of greater clinical significance is the differentiation of the various forms of acute hepatitis when presence of jaundice indicates pathologic changes in the liver. Omitting the hemolytic variety, jaundice is usually divided into the medical form—hepatitis and cirrhosis—caused by primary disease of the liver parenchyma and the surgical form secondary to tumor, stones or stricture. Typically, in the medical form, impairment of liver cell function will exceed disturbance of bile flow, and the reverse is true in the surgical form. The table lists the most commonly used laboratory tests arranged

Supported by a grant from the Dr. Jerome D. Solomon Memorial Research Foundation.

From the Hektoen Institute for Medical Research, the Department of Pathology of the Cook County Hospital, and the Department of Pathology, Northwestern University Medical School.

Read in a symposium on Disease of the Liver before the Section on Gastroenterology and Proctology at the Ninety-Sixth Annual Session of the American Medical Association, Atlantic City, N. J., June 11, 1947.

1. Barker, H. M.; Capps, R. B., and Allen, J. W.: Acute Infectious Hepatitis in the Mediterranean Theater Including Acute Hepatitis Without Jaundice, J. A. M. A. **132**:997 (Aug. 4) 1945. Klatskin, G., and Rappaport, E. M.: Late Residuals in Presumably Cured Infectious Hepatitis, Ann. Int. Med. **26**:13 (Jan.) 1947. Neefe, J. R.: Results of Hepatic Tests in Chronic Hepatitis Without Jaundice, Gastroenterology **7**:11 (July) 1946.

2. Myers, C. P.: Use of Methylene Blue in Testing for Bilirubin in the Urine, J. Indust. Hyg. & Toxicol. **27**:32 (Feb.) 1945.

V 13
1948

according to this principle.[3] Theoretically, therefore, these laboratory examinations in combination with the clinical findings should provide the diagnosis, were it not for several rather common exceptions to this rule; namely, (1) intrahepatic biliary obstruction complicating the medical form[4]; (2) secondary damage to

Hepatic Function Tests Indicating

Dysfunction of Liver Cells	*Impairment of Bile Flow*
Cephalin-cholesterol flocculation	Absence of urinary and fecal urobilinogen
Thymol turbidity	Elevated serum alkaline phosphatase
Reversal of albumin-globulin ratio	Hypercholesterolemia
Increased urinary urobilinogen	
Decrease of cholesterol ester ratio	
Reduced prothrombin (despite vitamin K therapy)	
Pathologic hippuric acid synthesis	
Reduced galactose tolerance	
Reduced plasma vitamin A	
Elevated serum bilirubin	
Urinary bilirubin	
Retention of sulfobromophthalein sodium	

the liver cells due to prolonged biliary obstruction, and (3) secondary damage to the liver cells due to purulent infection of the portal triads.

One approach to the solution of the aforementioned problems is liver biopsy in jaundiced patients. In recent years liver biopsy has been extensively employed by many investigators[5] following the extensive studies by Scandinavian[6] and British[7] workers. This paper represents an attempt to differentiate various forms of hepatitis on the basis of histologic examination of biopsy specimens. The pathologic changes in the biopsy specimen were studied as unknowns and later correlated with the results of laboratory and clinical observations.

MATERIAL AND METHODS

Biopsies, sometimes repeated, were performed on 243 patients, 43 of whom had cirrhosis and 125 acute or subacute hepatitis, the latter group representing the material of this study. Most of the biopsies were obtained by needle and some by excision during operation. Autopsy material was not included in this study, since comparison of biopsy material shortly before death with autopsy material shortly after death, obtained in a few cases, revealed that pronounced histologic changes develop rapidly after death. In arriving at the histologic criteria used, not only previous biopsy studies, especially those by Roholm and associates,[8] but also many of the excellent reported investigations on autopsy material[9] were utilized. In some instances, as in the differentiation between toxic and infectious hepatitis, our own experiences in fatal cases were helpful.[9] A series of hepatic function tests were performed simultaneously with the biopsy and at repeated occasions during the entire course of the disease. These included the tests listed in the table. As example of the groups in the table, cephalin-cholesterol flocculation,[10] thymol turbidity,[11] albumin-globulin ratio, serum al-

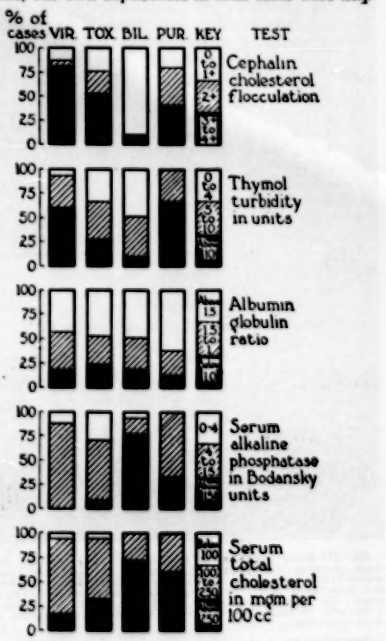

Fig. 1.—Relation of results of function tests to types of hepatitis in the studied cases. Solid black represents definite pathologic range, hashed portion (except for total serum cholesterol) slight pathologic range and white, normal range.

3. Neefe, J. R.; Stokes, J.; Reinhold, J. G., and Lukens, F. D. W.: Hepatitis Due to Injection of Homologous Blood Products in Human Volunteers, J. Clin. Investigation **23**:836 (Sept.) 1944. Meyrer, K. A.; Steigmann, F., and Popper, H.: Laboratory Diagnosis and Its Pitfalls in the Management of "Surgical Jaundice," S. Clin. North America **27**:37 (Feb.) 1947. Ivy, A. C., and Bath, J. A.: Why Do a Liver Function Test? Gastroenterology **1**:635 (July) 1943.

4. Lichtman, S. S.: Diseases of the Liver, Gallbladder and Bile Ducts, Philadelphia, Lea & Febiger, 1942. Steigmann, F., and Popper, H.: Intrahepatic Obstructive Jaundice, Gastroenterology **1**:645 (July) 1943. Watson, C. J., and Hoffbauer, F. W.: The Problem of Prolonged Hepatitis with Particular Reference to the Cholangiolitic Type and to the Development of Cholangiolitic Cirrhosis of the Liver, Ann. Int. Med. **23**:195 (Aug.) 1946. Hanger, F. M., Jr., and Gutman, A. B.: Postarsphenamine Jaundice, Apparently Due to Obstruction of Intrahepatic Biliary Tract, J. A. M. A. **115**:263 (July 27) 1940.

5. Baron, E.: Aspiration for Removal of Biopsy Material from the Liver, Arch. Int. Med. **68**:276 (Feb.) 1939. Tripoli, C. J., and Fader, D. K.: The Differential Diagnosis of Certain Diseases of the Liver by Means of Punch Biopsy, Am. J. Clin. Path. **11**:510 (June) 1941. Franseen, C. C.: Aspiration Biopsy with a Description of a New Type of Needle, New England J. Med. **224**:1054 (June 19) 1941. Gillman, T., and Gillman, J.: A Modified Liver Aspiration Biopsy Apparatus and Technique with Special Reference to Its Clinical Applications as Assessed by Five Hundred Biopsies, South African J. M. Sc. **10**:53 (June) 1945. Davis, W. D.; Scott, R. W., and Lund, H. Z.: Needle Biopsy of the Liver, Am. J. M. Sc. **212**:449 (Oct.) 1946. Asenfeld, H., and Brass, K.: Klinische und bioptische Untersuchungen ueber einen sogenannten Ikterus catarrhalis, Frankfurt. Ztschr. f. Path. **57**:147, 1942.

6. Iversen, P., and Roholm, K.: On Aspiration Biopsy of the Liver, with Remarks on Its Diagnostic Significance, Acta med. Scandinav. **100**:11, 1939. Roholm, K., and Iversen, P.: Changes in the Liver in Acute Epidemic Hepatitis (Catarrhal Jaundice) Based on Thirty-Eight Aspiration Biopsies, Acta path. et microbiol. Scandinav. **16**:427, 1939. Kraurup, N. B., and Roholm, K.: The Development of Cirrhosis of the Liver After Acute Hepatitis, Elucidated by Aspiration Biopsy, Acta med. Scandinav. **108**:306, 1941. Roholm, K., and Krarup, N. B.: Histopathology of the Liver in Obstructive Jaundice, Examined by Aspiration Biopsy, ibid. **108**:48, 1941.

7. Dible, J. H.; McMichael, J., and Sherlock, S. P. V.: Pathology of Acute Hepatitis: Aspiration Biopsy Studies of Epidemic Arsenotherapy and Serum Jaundice, Lancet **1**:402 (Oct. 2) 1943. Dible, J. H., and McMichael, J.: The Pathology of Arsenotherapy Jaundice, Brit. J. Ven. Dis. **19**:103 (Sept.) 1943.

8. See especially: Lucke, B.: The Pathology of Fatal Epidemic Hepatitis, Am. J. Path. **20**:471 (May) 1944. Lucké, B., and Mallory, T.: The Fulminant Form of Epidemic Hepatitis, ibid. **22**:867 (Sept.) 1946. Mallory, F. B.: Cirrhosis of the Liver, New England J. Med. **208**:1231 (June 16) 1933. MacMahon, H. E., and Mallory, F. B.: Streptococcus Hepatitis, Am. J. Path. **7**:299 (May) 1931. Rocrade, R.: Entzuendung der Leber, in Henke, F., and Lubarsch, O.: Handbuch der speziellen pathologischen Anatomie und Histologie, Berlin, Julius Springer, 1930, vol. 5, pt. 1. Eppinger, H.: Die Leverkrankheiten, Allgemeine und spezielle Pathologie und Therapie der Leber, ibid., 1937.

9. Popper, H., and Franklin, M.: Infectious Hepatitis Contrasted with Toxic Hepatitis, Proc. Inst. Med. Chicago **16**:353 (March) 1947.

10. Hanger, F. M.: Serologic Differentiation of Obstructive from Hepatogenous Jaundice by Flocculation of Cephalin-Cholesterol Emulsions, J. Clin. Investigation **18**:261 (May) 1939.

11. MacLagan, N. F.: Thymol Turbidity Test: A New Indicator of Liver Dysfunction, Nature, London **154**:670 (Nov.) 1944. Watson, C. J., and Rappaport, E. M.: A Comparison of the Results Obtained with the Hanger Cephalin-Cholesterol Flocculation Test and the MacLagan Thymol Turbidity Test in Patients with Liver Disease, J. Lab. & Clin. Med. **30**:983 (Dec.) 1945.

kaline phosphatase[12] and total serum cholesterol are recorded in figure 1.

CLASSIFICATION OF HEPATITIS

The primary (medical) type of hepatitis was subdivided into an infectious form due to a virus and a toxic form due to a multitude of etiologic factors; the secondary (surgical) hepatitis into a biliary and a purulent form.

Fig. 2.—Biopsy specimens of patients with virus hepatitis. *A*, mild stage, revealing slight degree of damage to the liver cells, moderate mesenchymal reaction characterized by proliferation of Kupffer cells and intralobular and periportal infiltration of round cells. *B*, severe stage. The pronounced damage to the liver cells is indicated by irregularity of nuclei and cytoplasm. The mesenchymal reaction is also more outspoken.

"Virus" Hepatitis (16 cases studied, 5 with repeat biopsies).—The name "virus hepatitis" is preferred, although the virus cannot usually be demonstrated, since the term "infectious" may also apply to bacterial infections, such as in pneumonia or cholangitis. Virus hepatitis may appear as an epidemic or sporadic form due to infection by the gastrointestinal route and characterized by an incubation period of seventeen to forty days, or as homologous serum jaundice acquired by parenteral injection of blood or its derivatives; this latter form is characterized by an incubation period of sixty to one hundred and thirty-five days.[13] The prodromal syndromes are gastrointestinal or "grip"-like in character. Etiologic factors such as transfusions, injections or army contact could be elicited in only 4 cases.

All tests for damage to liver cells were positive in result, the degree depending on duration and severity of the disease. There was some impairment of bile flow, the alkaline phosphatase being usually slightly elevated. Episodes of intrahepatic biliary obstruction ere found in 12.5 per cent of the cases.

Pathologically there was a diffuse damage to liver cells, slightly more pronounced centrally. The liver cells revealed irregular staining qualities of cytoplasm and nuclei and hazy outlines and often were completely hyalinized (Councilman bodies). Considerable regeneration, especially central, may be found early and become prominent in the healing stages. Fatty changes were

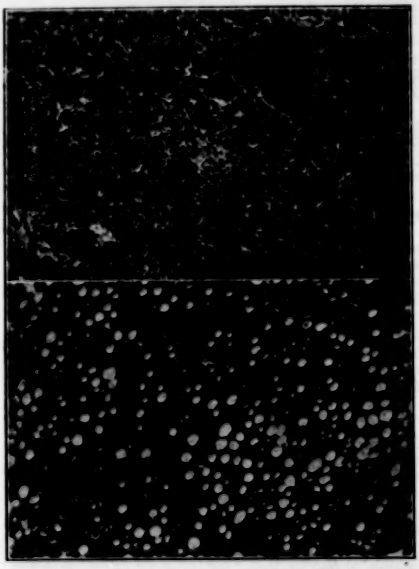

Fig. 3.—Biopsy specimens of patients with toxic hepatitis. *A*, Pronounced damage to liver cells, accentuated in central portion of lobule. There is little mesenchymal reaction, especially so in the periportal area. *B*, Diffuse fatty metamorphosis. The liver cells are damaged and many bile casts are noted.

rare. The strong mesenchymal reaction was characterized by proliferation of Kupffer cells and accumulation of round cellular, often phagocytic elements in and occasionally around the sinusoids; the periportal fields also revealed dense infiltration with similar cells. Neutrophilic polymorphonuclear leukocytes were almost completely absent; eosinophils, however, were not rare (fig. 2). Proliferation of immature bile ducts was found in more protracted cases, often also being associated with marked fibrosis radiating from the periportal fields. In the fatal form "explosive" destruction of liver cells with almost complete phagocytosis of the cellular remnants was present.

Toxic Hepatitis (21 cases studied, 10 with repeat biopsies).—It was due to various chemical (e.g., arsenic and cinchophen), bacterial (e.g., pneumococci) or endogenous (as in hyperthyroidism) toxins, or unknown injurious substances. In 8 cases an etiologic factor was elicited. The prodromal symptoms were variable, often being of short duration; occasionally there occurred protracted malaise. In general, the results of tests for damage to liver cells were abnormal. However, in a considerable number of cases the

12. Bodansky, A.: Determination of Serum Phosphatase: Factors Influencing the Accuracy of the Determination, J. Biol. Chem. **101**:93 (June) 1933.

13. Neefe, J. R.: Recent Advances in the Knowledge of "Virus Hepatitis," M. Clin. North America **30**:1407 (Nov.) 1946.

cephalin-cholesterol flocculation and thymol turbidity reactions were negative even when considerable damage to liver cells was indicated by the other tests. Tests indicative for impaired bile flow were positive in result more often than in the virus form, and intrahepatic biliary obstruction occurred in 33.3 per cent of these cases. Renal impairment was present in 28.5 per cent of the cases, as indicated by elevation of nonprotein nitrogen and other clinical and laboratory evidence of renal damage, such as oliguria and albuminuria. This renal impairment was even more strikingly represented in a series of fatal cases already mentioned.[9] Histologically, more or less severe damage to liver cells

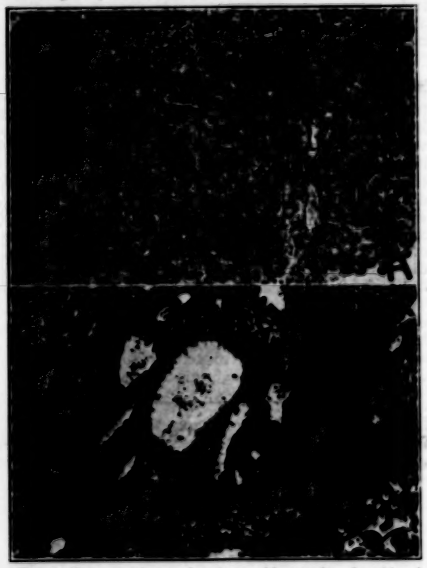

Fig. 4.—Biopsy specimens of patients with secondary hepatitis. *A*, biliary hepatitis. Bile casts are seen in the center of the lobules. There is moderate damage to the liver cells; the periportal fields reveal fibrosis and bile duct proliferation, but little infiltration. *B*, Purulent hepatitis. Dense round and polymorphonuclear infiltration of the portal triads. The bile ducts themselves are free; the adjacent liver parenchyma shows cellular damage.

was seen with coagulation necrosis and partial hyalinization of the cells. Fatty changes were commonly found, and in 3 cases dominated the histologic picture so as to produce diffuse fatty liver. The parenchymal damage was somewhat accentuated in the central areas. The mesenchymal reaction, when present, was decidedly subdued. Kupffer cell mobilization and round cellular macrophagic elements were not as prominent as in the virus form. Occasionally, however, a significant number of neutrophilic leukocytes could be seen (fig. 3). In the fatal cases, either central or peripheral necrosis was rather common and the gradual cell death with the presence of anuclear cell fragments was characteristic. In cases of intrahepatic biliary obstruction, bile casts appeared out of proportion to the amount of cellular damage. Proliferation of bile ducts occurred to a slight degree only.

Biliary Hepatitis (73 cases studied, 11 with repeat biopsies).—The damage to the cells is due to "back flow" of biliary products, probably bile acids. Its extent depends on duration and degree of biliary obstruction and is, therefore, far more pronounced in malignant tumors or strictures where obstruction is usually complete than in cholelithiasis. In our series, biliary hepatitis occurred in 33 patients with malignant tumors and 40 with cholelithiasis. As the process progressed, there were abnormal reactions to most tests for damage to liver cells. However, the cephalin-cholesterol flocculation was normal in most cases and the thymol turbidity only slightly elevated. The tests for biliary obstruction gave typically positive results. Renal damage as measured by elevated nonprotein nitrogen was found in 26.3 per cent of these cases. Histologically, bile casts and intracellular bile granules chiefly in the central zone indicated biliary stasis out of proportion to the degree of damage to the liver, especially in the earlier stages. However, every specimen examined revealed some damage to liver cells, predominantly in central areas. In later stages bile casts were also seen in the periphery of the lobules, the intermediary zone remaining free. Large areas of diffuse necrosis of the liver cells revealing biliary imbibition may appear (bile infarcts). Mesenchymal reaction was subdued, polymorphonuclear leukocytes being uncommon except in small focal necroses in cholelithiasis. Periportal infiltration was in the background. The Kupffer cells were proliferated and laden with bile. The periportal fields revealed a moderate amount of bile duct proliferation, and in the more protracted cases there was often pronounced periportal concentric fibrosis, sharply demarcated from the adjacent parenchyma (fig. 4 *A*). As the process progressed, the lobular pattern around the periportal fields became distorted and the picture resembled biliary or obstructive cirrhosis.[14]

Purulent Hepatitis (15 cases studied, 2 with repeat biopsies).—Purulent hepatitis is due to a bacterial infection of the portal triads apparently resulting from organisms which have passed from the portal system through the wall of the liver sinusoids into the perisinusoidal tissue spaces and are then carried to the terminal lymphatics, chiefly located in the portal triads. A perilymphangitic inflammation is set up and may encroach on the bile duct from the exterior. Less commonly, the infection can ascend via the lumen of the bile duct. The severity of the perilymphangitis, which may progress to a frank suppuration, does not depend on duration or degree of biliary obstruction and may even be found without it. It depends far more on inflammatory processes in the portal system, especially as seen in cholelithiasis. Our series consists of 11 cases of cholelithiasis, 2 of carcinoma of the pancreas and 1 each of duodenal ulcer and carcinoma of the stomach. Since this inflammation leads to toxic damage of the liver parenchyma, all tests for damage to liver cells become positive in result. The cephalin-cholesterol and thymol turbidity reactions may become positive if such a purulent process complicates previously simple biliary hepatitis. The tests for impairment of bile flow elicit positive reactions to a varying degree. Jaundice is not necessarily pronounced. However, clinical evidence of bacteremia, such as chills, fever and leukocytosis, are often encountered.

Histologically, inflammatory infiltration of the periportal fields was predominant, polymorphonuclear leukocytes being common. The bile ducts showed decided proliferation, chiefly mature in character. Leukocytic

14. MacMahon, H. E., and Mallory, F. B.: Obstructive Cirrhosis, Am. J. Path. 5:645 (Nov.) 1929.

infiltration often extending along the proliferated bile ducts was in larger portal triads, especially localized around the lymphatics. The liver parenchyma showed more or less diffuse damage to the liver cells and also focal necroses, which may become rather extensive (fig. 4 *B*). The evidence of biliary stasis varied in individual cases. In later stages the picture may simulate what has been called infectious cirrhosis.[15]

COMMENT

Liver biopsy has not only permitted a better evaluation of the hepatic function tests,[16] but it also has facilitated the clinical differentiation of hepatitis into several forms.

An attempt was made on the basis of morphologic criteria to subdivide primary hepatitis, which before World War II was usually called "catarrhal jaundice," into two groups, virus and toxic. In civilians the etiologic classification is usually difficult because causative agents are not often elicited. In the benign as well as in the fatal cases[9] the morphologic picture of toxic hepatitis was somewhat more commonly found than the virus form. The division of secondary hepatitis into two groups is of value because it emphasizes that in biliary obstruction damage to liver cells may occur early due to purulent inflammation. Some significance may also lie in the fact that the purulent form is suggestive of cholelithiasis, and this may have some value in distinguishing benign from malignant obstruction.

In the differentiation of the various forms of hepatitis, function tests may be of only limited help since damage to liver cells is present in all forms. The functional impairment may vary, depending on the stage of the disease; for example, in biliary hepatitis it may become apparent only with longer duration of the obstruction. In general, therefore, tests for parenchymal damage such as albumin-globulin or cholesterol ester ratios, excretion of hippuric acid, galactose tolerance, response of prothrombin time to vitamin K or plasma vitamin A do not necessarily differentiate the various forms of hepatitis. The cephalin-cholesterol flocculation is of greater value, and less so the thymol turbidity test, since these are only slightly affected, even in later stages of biliary hepatitis. However, one may also find negative cephalin-cholesterol flocculation and thymol turbidity reactions in a fair number of cases of toxic hepatitis, and positive cephalin-cholesterol flocculation and thymol turbidity reactions are often found in purulent hepatitis, which, being a secondary type of hepatitis, has a similar clinical significance to that of the biliary form. The tests for impairment of bile flow help also only to some degree in the distinction of the different forms of hepatitis. Obviously, more may be accomplished by repeated function tests during the course of the disease; e.g., urinary excretion of urobilinogen.[17]

The clinical differentiation between primary (medical) and secondary (surgical) hepatitis is facilitated by the use of the biopsy. The chief difficulty in our experience has been differentiation between toxic and early biliary hepatitis. In addition, occasionally a case may occur in which the morphologic picture does not permit a definite diagnosis. The difficulty in the clinical and functional differentiation of surgical and medical types of jaundice becomes especially apparent in the later stages of extrahepatic obstruction when the parenchymal damage simulates that found in the medical jaundice. It is in those instances that liver biopsy becomes of added importance because the longer the duration of the extrahepatic obstruction, the more characteristic becomes the morphologic picture for biliary hepatitis and the easier it is to differentiate it from virus or toxic hepatitis. The liver biopsy thus aids in the differentiation of intrahepatic obstruction in primary hepatitis from extrahepatic obstruction.

SUMMARY

With the help of liver biopsies, the attempt has been made to divide acute hepatitis into a primary (medical) form and a secondary (surgical) form. The former is further subdivided into virus (infectious) and toxic varieties. The secondary form is subdivided into a biliary (due to extrahepatic obstruction) and a purulent type (due to inflammation in the portal triads). This differentiation is based on pathologic findings in biopsy specimens, and is correlated with the laboratory findings found in the different groups. This classification of hepatitis into four groups helps in the differential diagnosis of jaundice by laboratory methods, especially distinguishing surgical from medical types of jaundice. The diagnosis of intrahepatic biliary obstruction in medical jaundice and its differentiation from extrahepatic biliary obstruction and the recognition of secondary damage to the liver in extrahepatic jaundice are especially facilitated through this approach.

15. MacMahon, H. E.: Infectious Cirrhosis, Am. J. Path. **7**:77 (Jan.) 1931.
16. Hoffbauer, F. W.; Evans, G. T., and Watson, C. J.: Cirrhosis of the Liver with Particular Reference to Correlation of Composite Liver Function Studies with Liver Biopsy, M. Clin. North America **29**:363 (March) 1945. Sherlock, S. P.: Biochemical Investigations in Liver Disease: Some Correlations with Hepatic Histology, J. Path. & Bact. **58**:523 (July) 1946. Popper, H.; Franklin, M.; Steigmann, F., and Kozoll, D. D.: Relation Between Structural and Functional Alterations of the Liver, J. Lab. & Clin. Med. **32**:310 (March) 1947.
17. Watson, C. J.: The Per Diem Excretion of Urobilinogen in the Common Forms of Jaundice and Disease of the Liver, Arch. Int. Med. **59**:206 (Feb.) 1937. Steigmann, F., and Dyniewicz, J. M.: Studies on Urobilinogen: II. Quantitative Urobilinogen Determinations in the Differential Diagnosis of Jaundice, Gastroenterology **1**:853 (Sept.) 1943.

DISEASE OF THE LIVER

A Review of Some Clinical and Biochemical Problems as Revealed by Systematic Biopsy Studies.

JOHN McMICHAEL, M. D.
London, England

Needle biopsy of the liver was first performed by Paul Ehrlich about 1883 and since then nearly 2,500 biopsies are on record.[1] Used widely in tropical medicine for the detection of amebic abscesses, it was recently revived for systematic use by Iversen and Roholm,[2] who recorded 160 liver punctures without a death. My associates and I began to use the method in the British Postgraduate Medical School in 1941 with the confidence suggested by Iversen and Roholm's report of its safety and in view of the urgent problems of hepatitis resulting from the war. In our first 150 biopsies we had 2 cases of intraperitoneal hemorrhage leading to death, both patients, however, having a degree of damage to the liver so severe that puncture only accelerated an already certain fatal issue. At that stage, however, we reviewed the technic and changed

Professor of Medicine, University of London; Director of the Department of Medicine, Postgraduate Medical School of London.

Address of the foreign invited guest read in a symposium on Diseases of the Liver before the Section on Gastro-Enterology and Proctology at the Ninety-Sixth Annual Session of the American Medical Association, Atlantic City, N. J., June 11, 1947.

1. Sherlock, S. P. V.: Aspiration Liver Biopsy, Lancet **2**:397, 1945.
2. Iversen, P., and Roholm, K.: On Aspiration Biopsy of the Liver, with Remarks on Its Diagnostic Significance, Acta med. Scandinav. **102**:1, 1939.

from a 2 mm. bore to a 1 mm. bore needle, and also decided to use a 5 inch (12.7 cm.) rather than a 3 inch (7.6 cm.) needle so as to take the cylinder of tissue from the depth of the liver rather than run the risk of leaving a bleeding hole on the surface. Since then Dr. Sherlock has carried out a further 250 biopsies with no fatalities. The risk of hemorrhage, however, is still present, and on two occasions transfusions have been required. On one occasion an abnormally placed gallbladder was punctured and the patient had to be operated on forthwith, but he made a good recovery after drainage of Morison's pouch. The technic is described in detail by Dr. Sherlock.[1]

DIAGNOSTIC PROBLEMS

In obscure diseases of the liver and blood the technic gives most valuable information of which the following are examples.

A patient with an enlarged spleen of obscure character in whom sternal marrow biopsy had given no help showed in the liver section large fibrillated cells with eccentric nuclei characteristic of Gaucher's disease.

A man aged 54 with macrocytic anemia and leukopenia refractory to all forms of liver therapy showed increased proliferation of the endothelium of the hepatic sinusoids. The picture most closely resembled the histiocytic medullary reticulosis described by Bodley-Scott and Robb-Smith.[3]

A soldier, aged 28, who had served in the Central Mediterranean Force, returned to England with irregular fever and enlargement of the liver, spleen and lymph nodes. No parasites were seen on sternal or splenic puncture, but liver biopsy showed reticuloendothelial proliferation in the hepatic lobules with characteristic Leishman-Donovan bodies of kala-azar.

A man aged 65 complained of anorexia and loss of weight. Barium meal, etc., failed to reveal an organic cause. Liver biopsy showed a squamous epithelioma. Repeat examination of the esophagus showed an extensive infiltration of the esophagus with carcinoma only visible on the lateral view and causing no obstruction.

A patient with pulmonary tuberculosis had an edematous type of nephritis. The differential diagnosis lay between nephrosis and amyloid disease. The congo red test was inconclusive; liver biopsy showed extensive infiltration with amyloid tissue.

STUDY OF DAMAGE TO THE LIVER AND RECOVERY

In acute hepatitis [4] one encounters the same pathologic pictures, whether the disease be of the ordinary epidemic variety or the result of arsenical or serum inoculations. Perhaps the only difference is that inoculation jaundice tends to be rather more severe. Intense destruction of liver cells with loss of the normal pattern of the liver characterizes the diffuse type of liver damage. So long as the reticulin pattern of the liver is preserved, full recovery and restoration of normal structure may take place. In others, however, the destruction is zonal in type, affecting particularly the periportal and central regions of the lobule. Some condensation of reticulin may occur in the periportal regions, and as the liver cells regenerate this zone cannot be occupied by liver cells and remains a picture of residual periportal scarring and slight bile duct proliferation. This does not constitute true cirrhosis. Such patients have no residual symptoms, and in 1 patient who died of another disease two years after his jaundice these periportal scars, previously seen at biopsy, had practically disappeared. In a very few instances true distortion of the architecture of the liver may take place with the development of cirrhosis. Even such scarred livers, however, are compatible with excellent health or only the mildest feeling of fulness after meals.

In passing I might note that I have seen normal recovery of severe hepatitis in a patient suffering from gross protein deprivation from a gastroileal fistula.

CORRELATIONS OF LIVER DAMAGE WITH HEPATIC FUNCTION TESTS

Dr. Sheila Sherlock [5] has carried out an extensive investigation using certain standard hepatic function tests and nearly simultaneous biopsy controls.

1. *The Hippuric Acid Synthesis Test.*—Synthesis of hippuric acid is impaired rather early in hepatic disease, but it is unfortunately also impaired in other conditions in which the liver on histologic section appears to be completely normal. Poor excretion occurs in cases of renal damage, and it is essential to check the test by running a urea clearance test at the same time. Owing to the absence of any recognizable histologic change in the liver, I feel exceedingly skeptical of the use of the hippuric acid synthesis test in the diagnosis of impaired hepatic function in such conditions as diabetes and rheumatoid arthritis.

2. *Bilirubin and Serum Alkaline Phosphatase.*—In obstructive jaundice serum phosphatase is raised up to 90 King-Armstrong units, and is seldom below 30 units. In hepatitis, however, it is seldom above 30 units. This is a most valuable aid in the differential diagnosis of obstructive jaundice from hepatitis.

Cases of hepatitis were subdivided into various grades of severity according to the number of surviving liver cells in each lobule as follows:— grade A, 75 to 100 per cent liver cell survival; grade B, 50 to 75 per cent; grade C, 25 to 50 per cent, and grade D, under 25 per cent. It was found that the depth of the jaundice was closely correlated with the severity of the damage to the liver cells. Phosphatase levels did not differ significantly in the various grades.

3. *Galactose Tolerance Test.*—We have used the time of disappearance from the blood of an injected dose of galactose (0.5 Gm. per kilogram of body weight: normal average, 60 minutes; range, 30 to 90 minutes). In grade A hepatitis the galactose time is not impaired. In grade B hepatitis it is usually about the upper range of normal, while in grades C and D significant impairment is the rule. Excretion of hippuric acid, on the other hand, is impaired early but gives no index of the severity of damage to the liver in the more severe grades.

The albumin-globulin ratio falls in grade C and is usually reversed (below 1) in grade D.

POSTHEPATITIS SYNDROME

Dr. Sherlock and Miss Walshe [6] have carried out extensive investigations on a number of patients with the posthepatitis syndrome sent by the military authorities. In practically all instances the livers have been histologically normal, and we have formed the impression that these patients are mostly suffering from a "hepatic neurosis." In few instances does there seem to be permanent damage to the liver after hepatitis.

3. Bodley-Scott R., and Robb-Smith, A. H. T.: Histiocytic Medullary Reticulosis, Lancet 2:194, 1939.

4. Dible, J. H., and McMichael, J.: Pathology of Arseno-Therapy Jaundice, Brit. J. Ven. Dis. 19:102, 1943. Dible, J. H.; McMichael, J., and Sherlock, S. P. V.: Pathology of Acute Hepatitis, Lancet 2:402, 1943.

5. (a) Sherlock, S. P. V.: Biochemical Investigations in Liver Disease: Some Correlations with Hepatic Histology, J. Path. & Bact. 58:523, 1946. (b) Hippuric-Acid Synthesis Test of Liver Function, Lancet 2:139, 1946.

6. Sherlock, S. P. V., and Walshe, V.: The Post-Hepatitis Syndrome, Lancet 2:482, 1946.

OBSTRUCTIVE JAUNDICE

The sequence of events is being followed in a large series of cases of obstructive jaundice.[3a] Bile thrombi accumulate in the bile canaliculi within the lobule, mainly in the central zones. Sooner or later the surrounding liver cells may degenerate in a focal fashion, and then one sees an area of bile necrosis. The bile ducts in the portal tracts proliferate with swollen epithelium, and a little periportal scarring may also develop. It is important to keep this picture in mind, as the histologic picture may closely resemble that seen in recovering hepatitis with residual periportal scarring. In the early days of our work we made at least one mistake in diagnosis of a biopsy specimen from failure to differentiate between these two pictures.

CONCLUSION

Aspiration liver biopsy seems now to have a diminishing risk and, provided it is carried out in hospital with strict preparations (1) to prevent the possibility of bleeding in a jaundiced patient and (2) to transfuse in the rare instances in which bleeding may occur, it is justified as a helpful procedure in obscure diagnostic problems when there is reason to suspect that the liver may be involved pathologically.

As an instrument of research it will yield much further information, as biochemical estimations of glycogen and histochemical and cytologic technics may also be applied to the fragments of tissue obtainable. As time goes on one may expect this method to be a source of further light on problems of pathologic changes and function of the liver in blood and metabolic diseases.

THE ACCURACY OF DIAGNOSIS OF JAUNDICE

WILLIAM F. LIPP, M. D.
ALFRED R. LENZNER, M. D.
and
A. H. AARON, M. D.
Buffalo

The primary responsibility in the management of the patient with jaundice is the decision whether or not to operate. In relation to this question all other factors are secondary in importance. Most of the more recent publications emphasize methods of diagnosis. In large part these methods are laboratory procedures and are clinical applications of the known physiology of the liver. These "batteries" and "profiles" of hepatic function include a multitude of tests which a clinician or general practitioner must attempt to evaluate. It is well known that one test has little value; a number must be employed if the total functional status of the liver is to be measured. It is difficult for the practicing physician to know what tests he should use and how the results should be interpreted. Unfortunately, too, this emphasis on laboratory procedure tends to depreciate the value of history taking and careful physical examination, and symptoms and signs become relegated to an inferior position. It is reassuring to know that not infrequently problems in diagnosis are encountered by the gastroenterologist and clinical investigator who have available an abundance of hepatic function tests, as well as the practitioner who is so often called on to establish his diagnosis through bedside observation with a limited number of tests.

From the Department of Medicine of the University of Buffalo and the Buffalo General Hospital.

Read in a symposium on Disease of the Liver before the Section on Gastro-Enterology and Proctology at the Ninety-Sixth Annual Session of the American Medical Association, Atlantic City, N. J., June 11, 1947.

It is true that in the majority of patients with jaundice resulting from disease of the pancreobiliary tract, the nature and site of the causative lesion can be rather readily determined through the interpretation of the clinical picture, and the accepted treatment, surgical or medical, can be instituted. For instance, the onset and course of infectious hepatitis in young persons is most often quite clear. The clinical picture of portal cirrhosis usually has a typical pattern. The story of severe pain in the right upper quadrant followed by jaundice, with a history of previous attacks in a woman of middle life or beyond indicates the presence of cholelithiasis with great reliability. The symptoms and signs of neoplastic obstruction may produce a less well defined clinical picture; yet frequently the course is characteristic. These diagnoses are made on firm clinical grounds and can be supported by easily acquired laboratory evidence.

However, unfortunately, every one has encountered a small but definite group of jaundiced persons in whom diagnosis resists the usual investigative methods. These persons are usually 40 years of age and older; the history is not typical; the physical findings do not conform, and the results of laboratory procedures may be misleading. Often pain is absent; frequently the jaundice is either prolonged or recurrent. After a period of observation, because of insecurity of diagnosis, exploratory laparotomy is suggested to avoid overlooking a stone in the common duct or new growth.

If it is accepted that the primary responsibility in the management of the jaundiced patient is to decide whether the treatment should be medical or surgical, it is practical to employ a classification which possesses these therapeutic indications. Thus one can divide jaundice (due to disease of the pancreobiliary tract) on a therapeutic as well as anatomic basis into intrahepatic jaundice and extrahepatic jaundice:

I. Intrahepatic jaundice
  1. Hepatocellular jaundice, parenchymal jaundice, etc.
  2. Infectious hepatitis, dystrophies, cirrhoses
  3. The treatment is medical
II. Extrahepatic jaundice
  1. Mechanical obstruction of the common bile duct
  2. Carcinoma, common duct stone, stricture
  3. The treatment is surgical

Intrahepatic jaundice includes all those lesions within the liver (it is frequently referred to as hepatocellular jaundice or parenchymal jaundice) such as infectious hepatitis, the dystrophies and cirrhoses. Here the treatment is medical.

Extrahepatic jaundice refers to those lesions which produce mechanical obstruction of the common bile duct below and beyond the liver (it is commonly called obstructive jaundice) such as common duct stone, new growths and stricture. Here the treatment is surgical, whether it be for cure or palliation.

In this study we have examined the experience of a general hospital in the management of jaundice. The purpose was to attempt to define the limitations of diagnostic methods through a frank appraisal of the degree of accuracy of diagnosis. The findings should reflect the experience of hospitals throughout the country at the general hospital level—the level at which a significant portion of the population is served.

MATERIAL AND METHOD

The records of 412 patients admitted to the Buffalo General Hospital during the period 1936 to 1946 with the presenting sign of icterus were reviewed. The patients were admitted on various services such as medicine, surgery and pediatrics, both ward and private room; and consequently a number of physicians and surgeons shared in their management. For this analysis,

first choice diagnoses were used in all instances. In each case the causative lesion was within the pancreobiliary tract; patients with hemolytic jaundice were excluded from the study. In most instances, the diagnosis was confirmed through surgical intervention, biopsy or postmortem examination. However, in the majority of cases of infectious hepatitis and in some cases of cirrhosis, the diagnoses were necessarily clinical.

The distribution of cases is shown in table 1.

TABLE 1.—*Distribution of Cases*

	Number	Percentage
A. Intrahepatic jaundice	175	42.5
1. Hepatitis—60		
2. Cirrhosis—91		
3. Dystrophy—24		
B. Extrahepatic jaundice		
1. Calculus	152	36.9
2. Carcinoma of pancreas	63	15.3
3. Biliary carcinoma*	15	3.6
4. Stricture	7	1.7

*The designation biliary carcinoma refers to malignant lesions other than neoplasms of the pancreas, such as carcinoma of the gallbladder, carcinoma of the bile ducts and metastatic carcinoma.

RESULTS

A. Analysis of Series.—An erroneous diagnosis (between intrahepatic jaundice and extrahepatic jaundice) was made in 16 of the 412 cases, an error of 3.8 per cent as shown in table 2.

TABLE 2.—*Errors in Four Hundred and Twelve Cases*

	Cases	Percentage
Intrahepatic vs. extrahepatic	16	3.8
Among extrahepatic group	7	1.6
Need for laparotomy	26	6.3

In 7 cases (1.6 per cent) a wrong diagnosis among the three common types of extrahepatic jaundice (stone in the common duct, carcinoma, stricture) was made, although the presence of extrahepatic obstruction was recognized.

In 26 cases (6.3 per cent) surgical exploration was performed to obtain a final diagnosis. This figure, of course, includes some of the erroneous diagnoses.

In addition there were in the extrahepatic group 13 cases of carcinoma arising elsewhere than the pancreas or ampulla, such as carcinoma of the bile ducts, carcinoma of the gallbladder and metastatic carcinoma. These were diagnosed either carcinoma of the pancreas or, more broadly, "biliary tract carcinoma." It does not seem fair to classify these as errors, inasmuch as the presence of extrahepatic malignant obstruction was recognized.

We were surprised and disturbed by this high degree of accuracy of diagnosis (approximately 90 per cent). It is accounted for in part by the large number of cases of infectious hepatitis in young age groups, the many instances of portal cirrhosis with a typical clinical picture and the large group of patients with a stone of the common duct with a characteristic history. Ease of diagnosis in typical cases is self evident, and fortunately this large group will include the great majority of patients encountered in private and hospital practice.

B. Comparison of Two Groups of Patients.—The series of 412 patients was divided into two time periods, the first consisting of patients admitted during the five year period 1936 to 1940 (162 cases) and the second consisting of those patients studied during the six year period 1941 to 1946 (250 cases). During the first period the diagnoses were based almost entirely on the interpretation of symptoms and signs with a limited use of technical procedures, while in the second period a number of laboratory procedures were employed in addition to bedside observation such as determinations of the plasma proteins, prothrombin and its response to menadione, sedimentation rate, alkaline phosphatase, cephalin cholesterol flocculation test, thymol turbidity test, roentgenographic examination of the duodenum and needle biopsy, as well as the usual routine laboratory studies.

The results of the comparison of these two groups of patients are shown in table 3.

TABLE 3.—*Comparison of Errors in Two Periods*

	1936-1940 (162 Cases)		1941-1946 (250 Cases)	
Type of Error	Number	Percentage	Number	Percentage
Intrahepatic vs. extrahepatic	10	6.1	6	2.4
Among extrahepatic group	2	1.2	5	2.0
Need for laparotomy	12*	7.4	14*	5.6

*This figure includes erroneous diagnoses, unless early death occurred.

There is a decided improvement in the degree of accuracy of diagnosis between intrahepatic jaundice and extrahepatic jaundice, with a decline in error from 6.1 per cent to 2.4 per cent.

There is little change in the number of errors among the various lesions which produce extrahepatic jaundice (1936 to 1940, 1.2 per cent; 1941 to 1946, 2.0 per cent).

There was a slight but significant decrease in the number of patients requiring surgical intervention to obtain a secure diagnosis (1936 to 1940, 7.4 per cent; 1941 to 1946, 5.6 per cent).

It is not likely that a single reason will explain this improving rate of accuracy of diagnosis. A number of factors are responsible. Review of the records with a comparison of the two periods demonstrates more intensive and thorough clinical study during the later period as evidenced by careful histories and physical examinations with repeated observations made over a longer period of time. The studies accorded patients in the earlier period were brief and inadequate in many instances, and it seemed that frequently surgical exploration was advised before complete observations had been made. Another factor is certainly the increasing employment of laboratory procedures for purposes of confirmation. Unfortunately, as originally hoped, the separate contribution made by various hepatic function tests could not be assessed.

C. Accuracy of Diagnosis in Specific Lesions.—The rate of accuracy of diagnosis in each of the various pancreobiliary lesions which produce jaundice is shown in table 4.

TABLE 4.—*Accuracy of Diagnosis in Common Lesions**

Lesion	Correct Diagnosis		Incorrect or Laparotomy	
	Number	Percentage	Number	Percentage
Intrahepatic (175)	153	87.4	22	12.6
Calculus (152)	147	96.7	3	1.9
Carcinoma of pancreas (63)	57	90.4	3	4.8
Biliary carcinoma (15)	13	86.6	1	6.6
Stricture (7)	6	85.7	0	0

*There were 2 cases of calculus, 3 cases of carcinoma of the pancreas, 1 case of carcinoma of the biliary tract and 1 case of stricture, in which another extrahepatic lesion was selected, accounting for the failure of some groups to total 100 per cent.

In 175 cases of intrahepatic jaundice, the diagnosis was correct in 153 (87.4 per cent). If this group were further broken down it would be found that as a rule the cases of infectious hepatitis and portal cirrhosis were rather readily diagnosed; while in the group of dystrophies, where bizarre clinical pictures were likely to occur, more errors were made.

In 152 cases of stone in the common duct, the correct diagnosis was made in 147 (96.7 per cent). This lesion usually produces a characteristic clinical picture. In this group typical biliary colic occurred in 84.9 per cent, pain of moderate intensity in 9.2 per cent, while there

were 5.9 per cent of so-called silent stones. Moreover, 76.9 per cent of patients gave a history of one or more previous episodes of colic, and, of these episodes, 36.7 per cent were associated with jaundice.

In 63 cases of carcinoma of the pancreas or ampulla, a surprisingly high rate of accuracy occurred, 57 cases, or 90.4 per cent, being diagnosed correctly. Again the clinical picture was of primary value. It might be mentioned that in contradistinction to recent reviews, the majority (58.7 per cent) of patients presented the picture of painless, progressive jaundice. Pain of varying degree was present in 41.3 per cent of patients. Of these, it was severe, simulating biliary colic, in 7.9 per cent; in 17.5 per cent there was moderate pain; in 15.9 per cent distress alone was described. In 7 patients (26.9 per cent) with pain, there was radiation through to the back, "boring" in nature.

In 15 cases of carcinoma of the biliary tract arising elsewhere than the pancreas or ampulla, such as carcinoma of the bile ducts, carcinoma of the gallbladder and metastatic carcinoma, the lesion was designated malignant in 13 (86.6 per cent), being called either carcinoma of the pancreas or broadly "biliary tract carcinoma." In 80 per cent of these it is significant that pain was absent, and the course was progressive. And if these cases are added to the group of carcinoma of the pancreas and ampulla, it is found that there was no pain in 64 per cent of patients with malignant obstruction.

In the 7 cases of stricture of the common bile duct the extrahepatic nature of the lesion was recognized, although in 1 the diagnosis of stone in the common duct was made.

So, of all cases of intrahepatic jaundice (175), the diagnosis was correct with no need for laparotomy in 153 (87.4 per cent). Surgical intervention was necessary in 19 cases (10.8 per cent), while 3 patients (1.8 per cent) died with acute necrosis.

If all cases of extrahepatic jaundice (237) are considered as a group, the diagnosis was correct (although a wrong lesion was selected in 7 cases) in 230 (97 per cent) and erroneous in 3 (3 per cent).

D. Analysis of Erroneous Diagnoses.—The erroneous diagnoses between intrahepatic jaundice and extrahepatic jaundice are listed in table 5.

TABLE 5.—*Sixteen Incorrect Diagnoses in Four Hundred and Twelve Cases*

Number	Original Diagnosis	Final Diagnosis
2	Undiagnosed	Intrahepatic jaundice
7	Calculus	Intrahepatic jaundice
3	Intrahepatic jaundice	Calculus
2	Intrahepatic jaundice	Carcinoma of pancreas
1	"Unexplained jaundice"	Carcinoma of pancreas
1	"Unexplained jaundice"	Biliary carcinoma

The most frequent error was that of diagnosing intrahepatic jaundice as stone in the common duct. This occurred in 7 patients, each of whom was submitted to operation; the final diagnosis was then established. These patients had pain of either severe or moderate intensity; several had chills, and all were in middle life or beyond. This error becomes less important in view of the advances in preoperative and postoperative care (selection of anesthetic agent, use of protective diet, administration of menadione and adequate fluids and blood).

The most serious error was that of diagnosing 5 extrahepatic lesions such as stone in the common duct and carcinoma of the pancreas as intrahepatic jaundice. In addition there were 2 cases of "unexplained jaundice" in which laparotomy was recommended. In these 7 cases error involved the life of the patient. Fortunately, despite clinical and laboratory evidence which favored the diagnosis of intrahepatic jaundice, surgical exploration was urged, and either curative or palliative measures were attempted.

E. Need for Surgical Exploration.—When this series of 412 patients is considered from the point of view of need for exploratory laparotomy, it is found that (exclusive of the patients dying within a few days following admission) there were 26 cases in which operation was required before a conclusive diagnosis between intrahepatic jaundice and extrahepatic jaundice could be established, or 6.3 per cent of patients, as shown in table 6.

TABLE 6.—*Need for Laparotomy*

Number of Cases	Final Diagnosis
19	Intrahepatic jaundice
3	Stone in common duct
3	Carcinoma of pancreas
1	Biliary carcinoma
26 Cases, or 6.3%	

In 13 of these cases the diagnosis had not been made or was erroneous.

In 13 the diagnosis was intrahepatic jaundice, but operation was deemed necessary to exclude a possible extrahepatic lesion such as stone or new growth. In this group of patients the jaundice was either prolonged or recurrent; pain was absent or slight, and the presence of a "silent" stone in the common duct could not be excluded with security.

As has been already noted, although the group with intrahepatic jaundice (19 cases) constitutes the more frequent problem, it is the group with extrahepatic lesions (7 cases) that is the more important from the point of view of life.

F. The Erroneous Diagnoses as a Group.—Analysis of the records of those patients in whom erroneous diagnoses were made reveals that 14 of the 16 patients were 40 years of age and older, with unusual clinical pictures as well as misleading results from laboratory procedures. Either the course was prolonged or the jaundice recurrent. Of the 2 patients younger than 40 years, one had a stone in the common duct and the other carcinoma of the head of the pancreas.

COMMENT

Although much progress has been made toward understanding the mechanisms of jaundice resulting from disease of the pancreobiliary tract, at the present state of our knowledge it will serve the best interests of the patient to employ a classification that has clinical value. The use of the terms intrahepatic jaundice and extrahepatic jaundice implies the ultimate problem of the jaundiced patient—the question of the need for operation—for one is a medical disease, while the other has surgical implications.

Fortunately, in the majority of patients a correct diagnosis will be arrived at through evaluation of the clinical picture. Recently the significance of such factors as age, sex, duration and depth of jaundice, pain, chills and fever, history of previous attacks, digestive symptoms, use of alcohol and exposure to other hepatotoxins, splenomegaly, palpable gallbladder, angioma, ascites and color of the stool was reemphasized.[1] It was noted that the clinical picture is most reliable in cases of stone in the common duct, infectious hepatitis in younger age groups and portal cirrhosis. Its value is somewhat less in carcinoma involving the biliary tract, while it

1. Lipp, W. F.; Lenzner, A. R., and Aaron, A. H.: The Value of Symptoms and Physical Signs in the Differential Diagnosis of Jaundice, New York State J. Med., to be published.

appears least reliable in various of the hepatic dystrophies. As is well known, the symptom pain alone is exceedingly valuable. However, while 94 per cent of patients with stone in the common duct had pain of some degree, it is the 6 per cent of patients with painless jaundice who make differential diagnosis difficult. Evaluation of the other clinical factors reveals similar variations which increase the difficulty of diagnosis in the individual patient.

Furthermore, in reviewing the present series of jaundiced patients, the limitations of laboratory procedures were again evident. For example, 35 per cent of patients with carcinoma of the pancreas had incomplete obstruction as indicated by brown stools and the presence of urobilinogen in the urine, a surprisingly high figure. Normal protein levels were present in 14.7 per cent of patients with portal cirrhosis, while abnormal values were found in 7.6 per cent of patients with neoplastic obstruction. The prothrombin response to menadione was good in 37.8 per cent of cases of intrahepatic disease and poor in 18 per cent of cases of extrahepatic obstruction. The result of the cephalin-cholesterol flocculation test was negative in 19.5 per cent of cases of intrahepatic lesions and 3 to 4 plus in 3 per cent of cases with extrahepatic obstruction. The limitations of hepatic function tests as well as the factors which restrict their value are well known.[2] Unless the results are interpreted by the clinician in the light of the clinical picture, they may lose what value they possess. Hepatic function tests may be used to support a clinical impression but not to make a diagnosis.

As a result of these discrepancies, present both in the clinical picture and in the results of the usual laboratory aids, an accurate differentiation between intrahepatic and extrahepatic jaundice will be exceedingly difficult in a small number of cases. Certainly a better understanding of the clinical entity known variously as intrahepatic obstructive jaundice [3] or cholangiolitic hepatitis,[4] in which intrahepatic disease is associated with obstructive features, will help to resolve a portion of this difficult group of cases. However, if surgically remediable extrahepatic lesions are not to be overlooked, laparotomy must be performed in those patients in whom there is reasonable doubt as to the nature and site of the lesion producing the jaundice. In the present series of 412 patients there were 26 instances in which operation was required because of uncertainty of diagnosis.

CONCLUSION

A study was made of the records of 412 patients admitted to a general hospital with the presenting sign of jaundice. In approximately 90 per cent of cases the correct diagnosis was made through evaluation of the clinical picture. In the majority of instances the results of the usual laboratory procedures supported the clinical impression. However, there remained a small group of patients of middle age and beyond in whom the clinical picture was atypical, the jaundice prolonged or recurrent and the laboratory evidence inconclusive. Exploratory laparotomy was necessary in these patients because of insecurity of diagnosis and in order to avoid overlooking a possible extrahepatic lesion susceptible to surgical attack.

2. Ivy, A. C., and Roth, J. A.: Why Do a Liver Function Test? Gastroenterology **1**:655-688 (July) 1943.

3. Steigmann, F., and Pepper, H.: Intrahepatic Obstructive Jaundice, Gastroenterology **1**:645-654 (July) 1943.

4. Watson, C. J., and Hoffbauer, F. W.: The Problem of Prolonged Hepatitis with Particular Reference to the Cholangiolitic Type and to the Development of Cholangiolitic Cirrhosis of the Liver, Ann. Int. Med. **23**:195-227 (Aug.) 1946.

EFFICACY OF LIPOTROPIC SUBSTANCES IN TREATMENT OF CIRRHOSIS OF LIVER

FREDERICK STEIGMANN, M. D.
Chicago

The effectiveness of choline in removing fat from the liver was first described fifteen years ago by Best and his co-workers.[1] Shortly thereafter other substances were found to have similar lipotropic activity, among them being casein,[2] an amino acid (methionine) [3] and yeast.[4] In animal experiments it was demonstrated that choline not only removes fat but also seems to arrest the cirrhotic process.[5]

Encouraged by results of animal experiments which demonstrated the effect of specific lipotropic substances on the production of cirrhosis on the one hand [6] and on the arrest [6b] and prevention of cirrhosis on the other,[7] many clinicians started to apply the physiologic principles learned from these animal experiments to human sufferers of cirrhosis.

This year marked the tenth anniversary of Patek's first paper on the treatment of cirrhosis by a high protein and high vitamin regimen,[8] a regimen which signified the first methodical approach to the study and management of the cirrhotic patient.

Various workers, shortly thereafter, confirmed Patek's original observation on their patients with cirrhosis. Some of these used strictly Patek's dietary regimen while others modified the procedure as to type of protein, vitamins, etc.[9] In recent years the Patek regimen of cirrhosis patients was further modified by the addition of specific lipotropic substances

From the Hektoen Institute for Medical Research and the Departments of Internal Medicine and Therapeutics of Cook County Hospital, and the Department of Internal Medicine, University of Illinois College of Medicine.

Supported by a grant from the Jerome D. Solomon Memorial Research Foundation.

Read in a symposium on Disease of the Liver before the Section on Gastro-Enterology and Proctology at the Ninety-Sixth Annual Session of the American Medical Association, Atlantic City, N. J., June 11, 1947.

1. (a) Best, C. H.; Hershey, J. M., and Huntsman, M. E.: The Control of the Deposition of Liver Fat, Am. J. Physiol. **101**:7, 1932. (b) Best, C. H., and Huntsman, M. E.: The Effects of the Components of Lecithin upon Deposition of Fat in the Liver, J. Physiol. **75**:405, 1932.

2. (a) György, P., and Goldblatt, H.: Observations on the Conditions of Dietary Hepatic Injury (Necrosis, Cirrhosis) in Rats, J. Exper. Med. **75**:355, 1942. (b) Daft, F. S.; Sebrell, W. H., and Lillie, R. D.: Production and Apparent Prevention of a Dietary Liver Cirrhosis in Rats, Proc. Soc. Exper. Biol. & Med. **50**:228, 1941. (c) Webster, G. T.: Cirrhosis of the Liver Among Rats Receiving Diets Poor in Protein and Rich in Fat, J. Clin. Investigation **21**:385, 1941. (d) Blumberg, H.; Mackenzie, C. G., and Seligson, D.: The Prevention by Choline, Methionine, or Casein of Dietary Cirrhosis of the Liver in Rats and Rabbits, Federation Proc. **1**:187, 1942.

3. (a) György and Goldblatt,[2a] (b) Blumberg, H., and McCollum, E. V.: The Prevention by Choline of Liver Cirrhosis in Rats on High Fat, Low Protein Diets, Science **93**:598, 1941. (c) Daft, Sebrell and Lillie,[2b] (d) Blumberg, Mackenzie and Seligson,[2d]

4. (a) György, P., and Goldblatt, H.: Experimental Production of Dietary Liver Injury (Necrosis, Cirrhosis) in Rats, Proc. Soc. Exper. Biol. & Med. **46**:492, 1941. (b) Blumberg, Mackenzie and Seligson,[2d]

5. (a) Earle, D. P., Jr., and Victor, J.: Cirrhosis of the Liver Caused by Excess Dietary Cystine, J. Exper. Med. **73**:161, 1941. (b) Lowry, J. V.; Daft, F. S.; Sebrell, W. H.; Ashburn, L. L., and Lillie, R. D.: Treatment of Dietary Liver Cirrhosis in Rats with Choline and Casein, Pub. Health Rep. **56**:2216, 1941.

6. (a) György, P., and Goldblatt, H.: Hepatic Injury on a Nutritional Basis in Rats, J. Exper. Med. **70**:185, 1939. (b) Rich, A. R., and Hamilton, J. D.: The Experimental Production of Cirrhosis of the Liver by Means of a Deficient Diet, Bull. Johns Hopkins Hosp. **66**:185, 1940. (c) Rich, A. R., and Hamilton, J. D.: Further Studies on Cirrhosis of the Liver Produced by a Dietary Deficiency, Tr. A. Am. Physicians **55**:133, 1940. (d) Lillie, R. D.; Daft, F. S., and Sebrell, W. H., Jr.: Cirrhosis of the Liver in Rats on a Deficient Diet and the Effect of Alcohol, Pub. Health Rep. **56**:1255, 1941. (e) Spellberg, M. A., and Keeton, R. W.: The Production of Fatty and Fibrotic Livers in Guinea Pigs and Rabbits by Seemingly Adequate Diets, Am. J. M. Sc. **200**:688, 1940. (f) Spellberg, M. A.; Keeton, R. W., and Ginsberg, R.: Dietary Production of Hepatic Cirrhosis in Rabbits, Arch. Path. **33**:204 (Feb.), 1942. (g) Earle and Victor,[5a]

7. György and Goldblatt,[4a] György and Goldblatt,[2a] Blumberg and McCollum,[3b] Webster,[2c] Fouts, P. J.: Vitamin B Complex Studies in Dogs: Production of Cirrhosis of Liver, J. Nutrition **25**:217, 1943.

8. Patek, A. J., Jr.: Treatment of Alcoholic Cirrhosis of the Liver with High Vitamin Therapy, Proc. Soc. Exper. Biol. & Med. **37**:329, 1937.

9. Fleming, R. G., and Snell, A. M.: Portal Cirrhosis with Ascites: An Analysis of Two Hundred Cases with Special Reference to Prognosis and Treatment, Am. J. Digest. Dis. **9**:113, 1942.

such as choline, choline and cystine, and methionine.[10]

Ten years have passed since the advent of the new regimen for cirrhotic patients; hence it was thought timely to compare the results of the different types of treatment of cirrhosis as observed in our clinic.

MATERIAL AND METHOD

During the ten years my associates and I have observed 247 cases of cirrhosis of the liver. These cases were divided into three groups. The first group consisted of 81 patients who were treated between the years of 1937 and 1940. These patients received a routine medical treatment that consisted of a diet high in carbohydrates (350 to 500 Gm.) and low in fat and proteins. Many of them received, additionally, dextrose intravenously in a 5 or 10 per cent solution.

TABLE 1.—*Clinical Data in the Three Groups of Cases of Cirrhosis*

		Patients on High Carbohydrate and Average Fat Diet	Patients on High Caloric, High Protein, High Vitamin and Low Fat Diet	
			Without Sprue Supplements	With Methionine or Cystine and Choline Added
Number of patients		81	119	47
Average age		47	50	46
Sex	Male	63	90	30
	Female	17	29	17
Alcoholic history		63	97	42
Duration of disease before hospitalization	Less than 1 yr. 70		84	36
	Over 1 yr. 11*		35†	11‡

*One patient had symptoms for five years; 2 for six, and 1 for eight years.
†Two patients had symptoms for five years; 3 for six; 1 for eight; 1 for ten; 1 for fifteen, and 1 for twenty-eight years.
‡Two patients had symptoms for five years and 2 for ten years.

The second group consisted of 119 patients who were treated from 1941 to date. They received a diet high in carbohydrates (350 to 500 Gm.); high in proteins [11] (100 to 150 Gm.) and low in fat (approximately 50 to 70 Gm.). In addition they received large doses of vitamin supplements.

The third group consisted of 47 patients who were treated since 1943. These patients were on a regimen essentially like those of group 2, but received one type of a lipotropic substance (cystine and choline [12] in doses of 3 Gm. [25 patients], 3 Gm. of choline [12] alone [12 patients] or 3 to 5 Gm. of methionine [12] daily [10 patients]).

The patients in all three groups represented on the whole a similar class of persons as is usually seen in a charity hospital. The average age and sex distribution was fairly close in all three groups, although there was a definitely higher incidence of cases among females in the past few years. The duration of the disease prior to entrance was also within similar time ranges, varying usually from weeks to months (table 1). There was, however, a small percentage of patients in each group in whom symptoms similar to the ones presenting themselves at entrance had been present, intermittently or constantly, for one or more years previously. (8.6 per cent, 14.2 per cent and 21.2 per cent, respectively.) In some patients a history of previous disease of the biliary tract with or without jaundice was obtained (in 4.9 per cent, 15.5 and 8.5 per cent of the three groups, respectively). A history of ingestion of alcoholic beverages was obtained in the majority of cases, with the percentages rising in recent years.

The physical findings on which the diagnosis of cirrhosis was made on initial examination presented themselves fairly comparably in all three groups also. Thus, the incidence of large livers, jaundice, splenomegaly and ascites was rather similar (table 2).

TABLE 2.—*Percentage of Abnormal Physical Findings in the Three Groups of Patients with Cirrhosis*

	Patients on High Carbohydrate and Average Fat Diet	Patients on High Caloric, High Protein, High Vitamin and Low Fat Diet	
		Without Sprue Supplements	With Methionine or Cystine and Choline Added
Number of patients	81	119	47
Jaundice	77.5	63.8	70.2
Ascites only	15.0	20	14.7
Enlarged liver only	22.5	31.1	25.1
Ascites and large liver	56.2	45.3	60.0
Splenomegaly	17.5	12.6	27.6

All patients had a battery of hepatic function tests performed at the start of the treatment and at variable intervals (two to four weeks) thereafter.

In 10 patients, 2 of group 2 and 8 of group 3, the clinical observations were checked morphologically by liver biopsies on specimens obtained by aspiration.[13] Of the 8 patients of group 3, 2 received the diet high in protein and vitamin supplements plus methionine as the lipotropic substance while 6 received cystine and choline as the specific factor.

RESULTS

The 81 patients of the first group were under treatment in the hospital from a minimum of seven to a maximum of two hundred and ten days with an average of thirty-seven days. Forty-one of them died some time during this observation period, while 40 recovered sufficiently to leave the hospital; i.e., they had improved regarding either their subjective or objective symptoms or both. Disappearance or decrease of ascites or edema, increase in intervals between paracenteses, disappearance of jaundice, decrease in size of the liver and improvement in the results of the hepatic function tests were considered signs of objective improvement. A better appetite, gain in weight (while not edematous or ascitic) and gain in strength were subjective signs of improvement.

Of the 40 patients who were discharged after the first admission, 26 were not seen thereafter, while 14 (35 per cent) reentered the hospital after an interval of one week to four years. Six of the 14 returned patients died after their second admission to the

10. (a) Russakoff, A. H., and Blumberg, H.: Choline as an Adjuvant to the Dietary Therapy of Cirrhosis of the Liver, Ann. Int. Med. **21**: 848, 1944. (b) Brown, G. O., and Muether, R. O.: Treatment of Hepatic Cirrhosis with Choline Chloride and Diet Low in Fat and Cholesterol, J. A. M. A. **118**:1403 (April 10), 1942. (c) Rimmerman, A.B.; Schwartz, S. O.; Popper, H., and Steigmann, F.: Dietary Factors in the Treatment of Cirrhosis Without Jaundice, Am. J. Digest. Dis. **11**: 401, 1944. (d) Morrison, L. M.: The Response of Cirrhosis of the Liver to an Intensive Combined Therapy, Ann. Int. Med. **24**: 465, 1946. (e) Barker, W. H.: The Modern Treatment of Cirrhosis of the Liver, M. Clin. North America, **29**: 273, 1945. (f) Labby, D. H., Shank, R. E.; Kunkel, H. G., and Hoagland, C. L.: Cirrhosis of the Liver, J. A. M. A. **125**: 1181 (April 19), 1947. (g) Beams, A. J.: The Treatment of Cirrhosis of the Liver with Choline and Cystine, J. A. M. A. **130**: 190 (Jan. 26), 1946.

11. The earlier patients (1941 to 1943) received protein of lacto-vegetarian origin.

12. This was provided by Wyeth Incorporated, Philadelphia.

13. Drs. H. Popper and M. Franklin reported on the histologic findings and Dr. D. D. Kosoff performed the biopsies.

hospital, which occurred from three weeks to nineteen months after their first discharge from the hospital. Eight of the patients again recovered sufficiently to leave the hospital. Of these, 2 died on subsequent readmissions (one during the third, eight months later, and one during the fourth admission, nine months later). The remaining 6 patients were seen at various intervals, until 5 of them became lost also after observation periods ranging from seven months to three and one-half years. One died only recently, after a total observation period of almost ten years.

The 119 patients comprising the second group were under care in the hospital from a minimum of one day to a maximum of 150 days. Of the 78 patients of subgroup (a), who were observed in the earlier part of this study (1941 to 1943), 25, or 32 per cent, died during the first hospital stay, while 53, or 68 per cent, recovered sufficiently to leave the hospital. Of these 53 patients 15, or 28 per cent, returned subsequently for hospitalization one to four times during the following year (three weeks to one year). Nine (60 per cent) of these 15 patients died during one of these readmissions to the hospital. The remaining 44 patients of this earlier group gradually ceased coming to the clinic, so that at present the fate of only 1 patient is known, who happens to be well and working hard nearly four years after his first admission to the hospital.

Of the 41 patients of subgroup (*b*), who were treated since 1944, 18 (44 per cent) died during the first stay in the hospital, while 23 recovered sufficiently to leave the hospital. Eight (34.8 per cent) of these 23 patients have returned one or more times for hospitalization during a period from one month to one year. Four of them died during one of these readmissions (2 during the first and 1 each during the second and third hospital stay, respectively). One is at present in the hospital. Of the remaining 18 patients, 5 come regularly to the clinic and show definite arrest of their condition, with slow but gradual improvement. The other 13 patients have not been seen at the clinic or in the hospital since their discharge—a period varying from four to fifteen months.

The 47 patients of the third group who received lipotropic substance in addition to their basic diet were, on the average, under hospital observation for a slightly longer time because most of them received the methionine or cystine and choline for at least four weeks before repeat studies were made on them. Of these 47 patients 6 (12.7 per cent) died during the first period of hospitalization, while 41, or 87.2 per cent, recovered sufficiently to leave the hospital. Of the 41 patients, 20, or 48.7 per cent, were readmitted at variable intervals to the hospital, 10 of them dying during these later admissions. Of the 31 surviving patients of this group, 2 are in a convalescent home, 18 are lost and the remaining 11 are under observation. Of these latter patients, 6 have been able to return to their previous occupation, while the remaining 5, although improved to various degrees both subjectively and objectively, still are below par, being able to perform only part of their previous tasks (table 3).

The 10 patients who were checked morphologically revealed disappearance of fat from the liver, while fibrosis, whenever present, was apparently unaffected.

COMMENT

The evaluation of any therapy of cirrhosis must take into consideration spontaneous remissions and irreversible stages of the disease. Nevertheless, there is a difference in results between the ancient high carbohydrate and the more recent high protein treatment as expressed in the lowering of mortality, decrease in morbidity and almost complete recovery, for the present at least, in a higher percentage of cases. It appeared, moreover, that the addition of specific lipotropic substances to the high protein dietary regimen has further improved the outlook of patients with cirrhosis.

The reports from various clinics in different geographic locations have been uniformly enthusiastic about the results of specific therapy (choline, methionine, choline and cystine) in cirrhosis.[10] Most workers, however, including Patek himself,[14] called attention to apparent therapeutic failures. It seems that the results are more favorable in the presence of a large liver (which indicates mainly fatty infiltration rather than fibrosis) than of a small one.[10,8] Furthermore, the presence of ascites decreases the therapeutic effects, which, too, would suggest that pronounced fibrosis in the liver as manifested by portal hypertension is not likely to be influenced by these substances.[15]

Because of the comparatively small number of patients (47) that received lipotropic substances, no attempt has been made to break down this group into smaller divisions according to the lipotropic substances which they received.

From these observations and from special studies on individual patients it appears to us that one is not justified in concluding that all the specific lipotropic substances are identical in their effect, or that the only effect of these substances, especially methionine, is lipotropic. I can just reemphasize the fact that on the basis of the still comparatively short period of observa-

TABLE 3.—*Morbidity and Mortality of the Three Groups of Patients with Cirrhosis*

Group	Treatment (Diet)	Number of Cases	Initial Hospitalizations: Number		Repeat Hospitalizations: Number			Duration of Observation	Cases still Observed	Cases Lost	Total Died	Percentage Who Died
			Died	Recovered	Returned	Died	Recovered					
I	High carbohydrate	81	41	40	14	9	5	Up to 4 yr.	0	31	50	61.7
II A.	High protein (lactovegetarian), low fat, vitamin supplements	78	25	53	15	9	6	Up to 6 yr.	1	43	34	43.5*
B.	High protein (meat), low fat, vitamin supplements	41	18	23	8	4	4	Up to 3 yr.	0	13	22	53.6*
III	High protein, low fat, vitamin supplements and lipotropic substances	47	6	41	20	10	10	Up to 3 yr.	11	20†	16	34

*The combined mortality for group 2 is 47 per cent.
†Two patients are in a convalescent home.

14. Patek, A. J., Jr.: The Dietary Treatment of Laennec's Cirrhosis, New York State J. Med. 46:2519, 1946.
15. Fleming and Snell,[9] Morrison,[8] ...

tion in a small series of cases, the addition of lipotropic substances (choline alone, choline and cystine, or methionine) enhances the beneficial effects of the high protein and high vitamin regimen. Moreover, while the clinical finding of decrease of the size of the liver and the morphologic finding of disappearance of fat from the liver after administration of these substances suggests a primary action of fat removal, many patients show other beneficial results during this regimen which apparently are not solely due to removal of fat. While some believe that fatty infiltration is the sole source in the production of cirrhosis,[16a] there are others[16] who do not feel that deposition of fat deserves absolute priority in it. The latter may be somewhat supported by our own observation that enlarged livers were found both in the patients who responded and those who did not respond to lipotropic substances. Thus, of the patients who died during their treatment with lipotropic substances, 83.2 per cent had enlarged livers, while of those who recovered, 78.8 per cent had hepatomegaly.

The sooner patients with cirrhosis receive intensive therapy, the better is their chance of improvement and eventual recovery. For the time being, however, we do not feel that our observations justify the conclusion that this recovery is mainly due to the fact that in the early stages the liver is primarily fatty and not fibrotic. It is nevertheless reasonable to conclude that on the basis of the known activity of lipotropic substances, patients who come under treatment before fibrosis has set in may have much better results from therapy with lipotropic substances than those who are seen later in the course of the disease when fibrosis has developed.

The patients in whom intensive therapy with lipotropic substances failed to result in recovery are obviously of great interest. The question arises whether this was due to the advanced stage of the condition or to other inherent difficulties of any therapy, or whether these cases possibly represented a different pathologic entity. From the observation of our small group of patients receiving lipotropic substances it can be stated that, if advanced stage is measured by duration of symptoms prior to entrance into the hospital, then it did not govern the response or nonresponse to treatment. Patients with symptoms of years' duration did better in some instances than those with symptoms of only several weeks. Thus of the 6 patients who died during their first hospitalization, 5 had symptoms of less than six months. However, if advanced stage is measured by the presence or absence of ascites, then it does influence the response to therapy.

Finally, failure of lipotropic therapy in cases of cirrhosis may be due to the underlying difference in the causal factors. While it is generally accepted that cirrhosis of the liver is a disease produced by deficient intake of various substances and that alcoholism plays only a conditioning role in many instances, it is nevertheless agreed that these factors are not the only ones leading to production of cirrhosis. Cirrhosis may occur in patients who do not drink, have no history of deficient food intake, but who have had acute hepatitis at some time in the past.[17] It is not unlikely, therefore, that patients with cirrhosis who do not respond to the present intensive therapy with specific lipotropic substances may represent a type of cirrhosis not on a deficiency basis. It is therefore believed that the histopathologist will have to differentiate the types of cirrhosis more specifically before it will be possible to evaluate more definitely the efficacy of the lipotropic substances in the treatment of cirrhosis.

16. György, P.: Personal communication to the author.
17. Bloomfield, A. L.: Natural History of Chronic Hepatitis (Cirrhosis of Liver), Am. J. M. Sc. 196: 429, 1938.

SUMMARY AND CONCLUSION

Two hundred and forty-seven cases of cirrhosis were observed during a period of ten years on three different therapeutic regimens.

The most recently used regimen, which consisted of a diet high in protein, high in vitamins, high in carbohydrates and low in fats supplemented by specific lipotropic substances (choline, choline and cystine, and methionine) proved to be the most efficacious, as evidenced by lower mortality and morbidity rates. There was also a higher percentage of recoveries under this regimen.

The results of therapy in all groups seemed to be definitely influenced by the presence or absence of ascites, little by the duration of the disease, as obtained from the history.

While basically the effect of therapy with lipotropic substances is considered to depend on the activity of these substances regarding fat removal, clinically one notices additional beneficial results.

Removal of fat from the liver, as noted morphologically in a few cases by liver biopsies and in many others by decrease in the size of the liver, is not always associated with other objective and subjective signs of improvement.

There exists a significant number of patients with cirrhosis who do not respond to lipotropic therapy. In many of these there seems to be some other underlying cause for the production of the cirrhosis than the previously generally accepted cause of nutritional deficiency conditioned by alcoholism.

ABSTRACT OF DISCUSSION

ON PAPERS OF DRS. MCMICHAEL; LIPP, LENENER AND AARON; POPPER AND FRANKLIN, AND STEIGMANN

Dr. Cecil J. Watson, Minneapolis: In approaching this problem for a number of years now, I have found help in starting on a fundamental basis, namely, the classification of these into two main types of jaundice: retention jaundice, characterized by an accumulation in the blood of delayed or indirect reacting serum bilirubin, and by the absence of bilirubin in the urine—and I should like to pause for just a moment to say I think it would be well if we could abandon the use of the term "direct" in relation to the van den Bergh reaction. It is misleading because it includes both "prompt" and "delayed," which, in my opinion, have quite different significance. I believe it is better to speak simply, of the prompt and the total bilirubin, the prompt being that reacting with the diazo reagent within one minute, the total that obtained by the method of Malloy and Evelyn. I can testify to everything that Dr. McMichael said about the value of liver biopsy generally. It has been of the greatest help to my associates and me. I am concerned, however, with the enthusiasm with which liver biopsy has been taken up in the country. I understand, rather through the grapevine, that some institutions have already abandoned it because of the mortality. I understand, too, that some persons are carrying out liver biopsy as an ambulatory procedure. I think that this is most unfortunate and will undoubtedly lead to trouble. We have not been willing to accept the occasional mortality which, so far as we can determine, is likely to occur with the posterior aspiration method as commonly used, and we believe the lateral intercostal method is also relatively dangerous because of the difficulty of getting at the area in case of a hemorrhage. For direct biopsy we have used the Silverman needle and insisted on there being a large and easily palpable liver, which, we were sure, was immediately beneath the abdominal wall. The prothrombin time should be normal or nearly so. In cases in which the liver is less

evident, the biopsy has been done under peritoneoscopic control, a long Silverman needle being inserted into the liver through a subcostal approach, under direct visualization.

DR. THEODORE GILLMAN, Johannesburg, South Africa: I wish to thank you for the opportunity of presenting some of the results of liver biopsy studies which my associates and I have conducted in South Africa. The technic which we now use is a modification of that introduced by Iversen and Roholm. Preliminary experimental work in our usual laboratory animal, the baboon, revealed that the type of instrument as well as the approach used by the Danish workers was fraught with a number of difficulties and certainly with dangers. Careful examination of the anatomy of the circulation in the liver, particularly of the venous sinuses which drain into the large hepatic veins, was such as to make the lateral approach less desirable than the anterior approach. We modified the needle considerably, bearing in mind the warning which Professor McMichael had given about carrying out the biopsy with great speed. The main object of our modification in approach and in the construction of the instrument was to speed up the procedure in such a way that it was all over in a few seconds. We have now carried out about a thousand liver biopsies and thus far have contributed to the death of 1 patient, who had a huge tuberculotic liver, over the surface of which ran an extremely large vein. Even in this case the death could have been avoided if adequate surgical facilities had been available at the time. This method in the first place has provided us with a tremendous weapon in understanding pathologic changes in the liver in patients with known hepatic disease; perhaps equally important, it has permitted us to study the reactions of the liver in diseases in which pathologic changes of the liver are not initially expected. It is to this second type of problem that our studies have been mainly directed. We found a high incidence of hepatic disease, something like 97 per cent, in pellagra and allied forms of chronic malnutrition. We found that many substances, acclaimed as useful in the treatment and prevention of disease of the liver experimentally, were unsatisfactory in treating human hepatic disease. It soon became clear that once the liver had become damaged, other organs were also affected, including the nervous system, the endocrines and the alimentary canal, and that these other organs could contribute to the progress of the disease no less than did the hepatic disease. At that stage, it did not seem entirely satisfactory to direct attention solely to the existing hepatic disease. This led us to seek for therapeutic methods not aimed directly at the liver.

DR. DAVID ADLERSBERG, New York: Among other metabolic changes encountered in disease of the liver, one finds severe alterations of the metabolism of water. Parenchymal hepatic damage, especially in severe disease, is associated with retention in the tissues of orally ingested water ("hepatic oliguria"), while the stage of improvement and repair is often characterized by polyuria and removal of excessive water from the tissues. These changes of water metabolism may be used for diagnostic purposes. For those interested in a simple and practical hepatic function test which requires no laboratory and can be easily performed in the patient's home, the water tolerance test is recommended. Fasting patients are given 1,500 cc. of tap water within twenty to thirty minutes. Specimens of urine are then obtained every thirty minutes for five hours; the volume and specific gravity of each specimen are measured. In the absence of other factors influencing water metabolism —cardiac or renal disease, fever, ascites or visible edema— pronounced retention of water in the water tolerance test indicates hepatic damage (details may be found in: Adlersberg, D., and Fox, C. L., Jr.: *Ann. Int. Med.* **19**:642 [Oct.] 1943). These observations have been recently confirmed and amplified by Dr. Hoagland and his group at the Hospital of the Rockefeller Institute in New York. The classification of hepatitis according to the severity of the disease, as used by Professor McMichael (grades A, B, C and D) will be of great help in future studies. My associates and I tried to employ a simpler subdivision of hepatitis in the daily clinical routine in "mild, moderately severe, severe and very severe." I was interested in Professor McMichael's remarks regarding the hippuric acid test. I agree with him that it is too sensitive for clinical purposes. I stressed this fact in my studies of hepatic function about ten years ago.

DR. JOHN MCMICHAEL, London, England: I have listened with great interest. The work that is going on is bound, sooner or later, to take us a great deal further than we stand today. The work which Dr. Gillman is doing in South Africa I think yields an enormous and unique field for studies on the nutritional type of hepatic disorder. I wish he had been able to tell more than he did in the time at his disposal. His experience has been astonishing in the nutritional field of disease of the liver. I am glad to hear him sound a warning about the tendency to use some of the amino acid and liver-trophic substances rather loosely, as though these were panaceas for disease of the liver. My experience in using these substances has been limited, but certainly we have had enough in the way of negative answers to make us extremely cautious; however, it is important that we should all continue to produce as much evidence as we can, and sooner or later we will get these problems sifted out.

Council on Pharmacy and Chemistry

NEW AND NONOFFICIAL REMEDIES

The following additional articles have been accepted as conforming to the rules of the Council on Pharmacy and Chemistry of the American Medical Association for admission to New and Nonofficial Remedies. A copy of the rules on which the Council bases its action will be sent on application.

AUSTIN SMITH, M.D., *Secretary.*

PENICILLIN (See New and Nonofficial Remedies, 1947, p. 144).

The following additional dosage form has been accepted:

ABBOTT LABORATORIES, NORTH CHICAGO, ILL.

Penicillin Sodium: 1,000,000 unit vials.

PREMO PHARMACEUTICAL CO., INC., NEW YORK

Crystalline Penicillin G Sodium in Oil and Wax: 300,000 units per cubic centimeter, 10 cc. vials. Penicillin G sodium suspended in sesame oil containing 4.8 per cent (W/V) white wax, U. S. P.

METHIODAL SODIUM (See New and Nonofficial Remedies, 1947, p. 290).

The following dosage form has been accepted:

WINTHROP-STEARNS, INC., NEW YORK

Solution Skiodan 40 per Cent: 100 cc. bottles.

Solution Skiodan 20 per Cent: 50 cc. bottles.

NITROFURAZONE (See New and Nonofficial Remedies, 1947, p. 81).

The following additional dosage form has been accepted:

EATON LABORATORIES, INC., NORWICH, N. Y.

Solution Furacin 1:500: 480 cc. bottles. Each 100 cc. contains nitrofurazone 0.2 Gm. and polyethylene glycol of mono-iso-octyl phenyl ether 0.3 Gm. in a mixture of polyethylene glycol 300, 32.5 Gm.; "carbowax 1540," 32.5 Gm., and water.

DIGITOXIN (See New and Nonofficial Remedies, 1947, p. 250).

The following additional dosage form has been accepted:

WYETH INCORPORATED, PHILADELPHIA

Solution Purodigin: 1 cc. Tubex (U. S. Trademark 406632. Each cubic centimeter contains 0.2 mg. of digitoxin in 40 per cent alcohol solution.

U. S. trademark 411,271.

CORRECTION

The monograph on Isobornyl Thiocyanoacetate-Technical which appeared under New and Nonofficial Remedies in THE JOURNAL, April 24, page 1099, should be corrected to read as follows:

Tests and Standards.—

Paragraph 1, sentence 3, "The refractive index... is 1.512."

Paragraphs 2 and 4, sentence 1, "Add...2*N* alcoholic potassium hydroxide."

Paragraph 2, sentence 3, "Acidify...with diluted sulfuric acid...."

Paragraph 5, sentence 1, "Dissolve 10 Gm...in 25 cc. of saturated methanolic potassium hydroxide..."

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

535 North Dearborn Street - - Chicago 10, Ill.

Cable Address - - - - "Medic, Chicago"

Subscription price - - - - - Twelve dollars per annum in advance

Please send in promptly notice of change of address, giving both old and new; always state whether the change is temporary or permanent. Such notice should mention all journals received from this office. Important information regarding contributions will be found on second advertising page following reading matter.

SATURDAY, MAY 15, 1948

EDITORIAL ANNOUNCEMENT

The absence of the compositors from their work continues. This issue of THE JOURNAL has been prepared in part by the use of Vari-Typer machines.

STREAMLINING HEALTH EXAMINATIONS

Physicians and patients have been aware for many years of the importance of periodic examinations. Early diagnosis and the application of the "stitch in time" work wonders in tuberculosis, cancer, diabetes, heart disease, hypertension and most other chronic diseases. In most physicians' offices health examinations take time, frequently one or two hours. Few patients could bear the financial burden of the time taken. If the physician habitually contributed the extra time this eventually would become a burden.

Now the Joint Committee on Health Problems in Education of the National Education Association and the American Medical Association[1] suggest (*a*) that health examinations of school children be done routinely at this healthiest period of their lives only every three years, (*b*) that the parent accept the responsibility for furnishing the health history, (*c*) that the teacher take the responsibility for such tests as height, weight, vision and hearing, (*d*) that the parent or nurse be present at the examination in order to take prompt steps to follow up the discovery of defects with remedial action, and (*e*) that the physician devote only fifteen minutes of his time to making those tests and observations which obviously demand medical experience and judgment.

Suggestions for streamlining the more complex adult examination have also been made. White and Geschickter[2] have analyzed the approximately two thousand currently recognized disease entities and find that two hundred diseases are responsible for 98 per cent of the illness in the United States. They also find that sixteen common symptoms, twenty-three leading physical abnormalities and six essential laboratory observations will serve as keys for the differential diagnosis of these two hundred diseases. With the history and certain routine parts of the examination carefully completed by a well trained technical assistant and with the laboratory tests performed by the technician, the actual time demanded from the physician to determine the presence or absence of the twenty-three leading physical abnormalities and to summarize the result is estimated to average not more than ten to thirty minutes.

These efforts to "streamline" health examinations must not be confused with the recent recommendations of the Subcommittee on Physical Fitness of the Baruch Committee on Physical Medicine,[3] which call for an examination not only establishing the presence or absence of abnormalities but also the patient's fitness for work and play activities as well as his "will to do." Nor should these efforts be confused with the "Physical Profile Serial"[4] used by the British and Canadian armed services and suggested to leaders of our armed services for functionally classifying our manpower so that recruits could be called up hurriedly in classes.

Since 1923 the American Medical Association has sponsored the movement to popularize periodic health examinations.[5] These new reports merit careful study for their contribution to this important movement.

EVOLUTION OF MOLD ARTHROPLASTY OF THE HIP JOINT

Three main reasons, according to Smith-Petersen,[1] have been responsible for limited success in arthroplasty of the hip joint: surgical approaches were traumatic and inadequate, the joint created was defective because of lack of proper instruments, and the underlying principle of interposing a perishable

1. Smiley, D.F., and Hein, F. V.: The Health Appraisal of School Children, Report of the Joint Committee on Health Problems in Education of the National Education Association and the American Medical Association, Chicago, 1948.

2. White, B. V., and Geschickter, C. F.: Diagnosis in Daily Practice Philadelphia, J. B. Lippincott Company, 1947.

3. Report of the Subcommittee on Physical Fitness to the Baruch Committee on Physical Medicine, New York.

4. Physical Profile Serial, supplement to Standards of Physical Examination During Mobilization, War Department, Mobilization Regulations 1-9, May 22, 1946.

5. Periodic Health Examination: A Manual for Physicians, Chicago, American Medical Association, 1940.

1. Smith-Petersen, M. N.: Evolution of Mould Arthroplasty of the Hip Joint, J. Bone & Joint Surg. 30 B:59 (Feb.) 1948.

V 1
194

barrier between imperfectly shaped joint surfaces was not sound. The supra-articular, subperiosteal approach to the hip developed by Smith-Petersen improved the exposure of the head and neck of the femur, and the excision of the anterior superior wall of the acetabulum permitted access to the other side of the joint. A fortuitous circumstance suggested to the author the idea of the mold. In 1923 a piece of glass which had been embedded for a year was removed from a patient's back. The glass was surrounded by a minimal amount of fibrous tissue, lined by a glistening synovial sac that contained a few drops of clear yellow fluid. This benign reaction to an inert foreign body suggested that here was a process of repair which might be applied to arthroplasty.

The idea gradually developed that a mold of some inert material interposed between newly shaped surfaces of the head of the femur and the acetabulum would guide nature's repair so that defects would be eliminated. The first material used was glass. Some of the glass molds broke after having been in place for a short time. When the pieces were removed the acetabulum and head of the femur were found to be covered by a firm, glistening lining, thus furnishing evidence that the principle of guiding nature's repair by means of a mold was sound. Smith-Petersen next resorted to "pyrex" molds with much the same results. In 1938 he began to use "vitallium" in his hip arthroplasties. Since then over five hundred hips have been operated on by this method at Massachusetts General Hospital; eighty of these operations were bilateral.

Law[2] has now reported that 80 per cent of late results were satisfactory to both patient and surgeon in 150 cases. Striking features were the relative painlessness, smooth movement of the hip joint, progressive improvement in function and reformation of the joint lines as seen roentgenographically. Function after arthroplasty for traumatic and degenerative arthritis approaches that of the normal hip joint much more closely than in cases of infected and rheumatoid arthritis. There is a complete absence of low back symptoms or postural difficulties. The operative mortality rate in this series was nil. During the six year period only 1 patient died as the result of a complication of the arthroplasty. Secondary operative revisions are often necessary, particularly in defective and rheumatoid arthritis. According to Smith-Petersen, this is the first time that the principle of the mold, the principle of guiding the repair of nature for the purpose of recreating a destroyed or damaged structure, has been applied to surgery.

2. Law, W. A.: Post-Operative Study of Vitallium Mould Arthroplasty of the Hip Joint, J. Bone & Joint Surg. 30 B:76 (Feb.) 1948.

Current Comment

EARLIER DISCOVERY AND TREATMENT OF DIABETES MELLITUS

The number of latent and undiscovered cases of diabetes in the United States is much larger than formerly supposed. The United States Public Health Service about two years ago established a Diabetes Office in Boston; their survey of 3500 citizens of Oxford, Mass., in 1946 disclosed that 40 cases of diabetes were known to the physicians in the town but that there were 30 more entirely unrecognized cases. In this country there are at least 1,000,000 undiscovered cases of diabetes and also a large number of others in persons whose diabetes is labeled mild and who therefore are under little careful treatment. The result of the lack of treatment during several years in this middle-aged group of persons with mild cases of the disease is that later they appear with gangrene and retinitis but too late for remedy. The American Diabetes Association, composed of about a thousand physicians interested in diabetes, has appointed a committee to consider means of discovering these latent cases.

They have established a journal for the public called *A.D.A. Forecast*. This committee is also considering a "Diabetic Week" for some time in November or December. The suggestion has been made that centers be established, to be manned by physicians, in which tests of blood and urine could be performed on any person but especially on the relatives of diabetic patients. If diabetes was discovered the patient would be sent to his own physician for further treatment. Discovery of these patients with untreated diabetes is definitely a medical responsibility.

ASCORBIC ACID CONTENT OF STRAWBERRIES

Strawberries are an important source of ascorbic acid, vitamin C, although the vitamin content varies widely between varieties and even within the varieties. Much of the variation is due to heredity and environment. Investigators[1] in the U. S. Department of Agriculture recently tested a sufficient number of samples to permit statistical

1. Ezell, Boyce D.; Darrow, George M.; Wilcox, Marguerite S., and Scott, D. H.: Ascorbic Acid Content of Strawberries, Food Research, Vol. 12, November-December, 1947.

analysis of the data as to the nutritional value of the berries, the effects of shading the plants and the stage of maturity. Prominent varieties grown in the South—Blakemore, Klondike, Klonmore, Massey and Missionary—averaged about 50 mg. of ascorbic acid per 100 Gm. of berries for about 50 per cent of the national crop. The ascorbic acid content of many varieties grown in the Northeast averaged 60 to 65 mg. for 30 per cent of the national crop. In the Pacific Northwest Corvallis, Marshall and Red Heart varieties are high in ascorbic acid, averaging between 75 and 80 mg. for about 12 per cent of the national crop. The average for the entire crop of the country is said to be about 60 mg. per 100 Gm. of berries. Among the commercial varieties, a high ascorbic acid content was found in Catskill, Corvallis, Gandy, Fairmore, Fairpeake, Marshall, Red Heart and Tennessee Beauty. The environment that produces the best flavor includes high light intensity, warm days, cool nights and long daily light periods. High ascorbic acid content also is favored by moderately warm days, cool nights and high light intensity. Strawberries grown in the shade contained much less ascorbic acid than those exposed to normal sunlight. Half-red berries held for one or two days until finally red increased in ascorbic acid content, but not as much as did those ripened on the plant. These investigators concluded that the ascorbic acid content of strawberries in the United States probably averages about 60 mg. per 100 Gm. They believe that by breeding the average vitamin content could be increased up to 80 mg. or more.

NOMENCLATURE OF THE ANTI-Rh TYPING SERUMS

Castle, Wintrobe and Snyder[1] have recently reported the conclusions of the Advisory Review Board which convened at the request of the Surgeon General, U.S. Public Health Service, to consider nomenclature for anti-Rh typing serums. Evidence was presented by eight outstanding producers and users of such serums in the United States. The several discoveries and other considerations leading to the two main systems of nomenclature, i.e., the Wiener system and Fisher-Race system, were thoroughly discussed. The evidence presented indicates that the Fisher-Race nomenclature is much simpler and more easily understandable than the Wiener system. However, final decision was reserved, thus continuing the confusion which surrounds Rh terminology. As there is still confusion in many parts of the world with regard to the differences in the Moss and Jansky classification of blood groups, it seems probable, because of the relatively much greater complexity of, and numbers of genes entering into, the Rh system, that the net result of the present lack of decision will be even more confusing.

The evidence for the decision of the advisory board is summarized as follows:

IN FAVOR OF WIENER'S NOMENCLATURE

1. It has priority, having been proposed by one of the discoverers.
2. It is in use by many clinicicians and research workers and is understood by them.
3. It is used by nearly all the writers on the subject in the Western Hemisphere.
4. No conclusive evidence has been presented against the theory on which it is based.

AGAINST WIENER'S NOMENCLATURE

1. It does not always specify the antigens present in the type name, and it almost never does so in the genotype name.
2. It has changed rapidly from year to year.
3. It is losing followers among the producers and users of serums.
4. It involves complications, both typographic and genetic, of subscripts, superscripts, numbers, primes and other symbols.
5. It involves the somewhat doubtful assumption of multiple antigens produced by single genes.

IN FAVOR OF THE FISHER-RACE NOMENCLATURE

1. It always specifies in both type name and genotype name the individual antigens present.
2. It is in wide usage in England, is gaining in usage in the Western Hemisphere, and hence may become the international standard.
3. It is simple and direct, both typographically and genetically.
4. It conforms to a one to one correspondence between gene and antigen.

AGAINST THE FISHER-RACE NOMENCLATURE

1. It lacks priority.
2. It is based on a genetic hypothesis which is purely theoretic and for which no clear proof exists—a hypothesis no more tenable on genetic grounds than Wiener's hypothesis.

The board reached the following conclusions:

The Board, having carefully considered the above historical development of the two systems of nomenclature and having weighed the arguments in favor of, and opposed to, each system, is forced to the conclusion that for the present a compromise must be made, and both systems must be used on the container labels and package labels. Because the Wiener system has priority and is understood by everyone in the United States concerned with the production and use of anti-Rh serums, the Board recommends that the Wiener terminology appear first on the label followed by the Fisher-Race terminology in parentheses. Typical labels would then appear somewhat as follows:

Anti-Rh Typing Serum (human)
Anti-Rho (Anti-D)
Slide test
Lot No.
Manufacturer

Anti-Rh Typing Serum (human)
Anti-Rho (Anti-C plus D)
——————tube test
Lot No.
Manufacturer

Anti-Hr Typing Serum (human)
Anti-hr' (Anti-c)
Capillary test
Lot No.
Manufacturer

Anti-Rh Typing Serum (human)
Anti-rh' (Anti-C)
Slide test
Lot No.
Manufacturer

The package label and literature might contain, in addition to the above, the description of the test by means of which the serum is to be used.

1. Castle, W.B.; Wintrobe, M.M., and Snyder, L.M.: Science 107: 27-31 (Jan. 9) 1948.

V 1
194

THE CHICAGO SESSION

AMERICAN MEDICAL ASSOCIATION, NINETY-SEVENTH ANNUAL SESSION
CHICAGO, JUNE 21-25, 1948

OFFICIAL CALL

TO THE OFFICERS, FELLOWS AND MEMBERS OF THE AMERICAN MEDICAL ASSOCIATION

The ninety-seventh annual session of the American Medical Association will be held in Chicago, June 21-25, 1948.

The House of Delegates will convene at 10 a. m. Monday, June 21. In the House the representation of the various constituent associations for 1947, 1948 and 1949 is as follows:

Alabama	2	Nevada	1
Arizona	1	New Hampshire	1
Arkansas	2	New Jersey	5
California	9	New Mexico	1
Colorado	2	New York	20
Connecticut	3	North Carolina	3
Delaware	1	North Dakota	1
District of Columbia	2	Ohio	7
Florida	2	Oklahoma	2
Georgia	3	Oregon	2
Idaho	1	Pennsylvania	10
Illinois	9	Rhode Island	1
Indiana	4	South Carolina	1
Iowa	3	South Dakota	1
Kansas	2	Tennessee	2
Kentucky	2	Texas	5
Louisiana	2	Utah	1
Maine	1	Vermont	1
Maryland	2	Virginia	2
Massachusetts	6	Washington	2
Michigan	5	West Virginia	2
Minnesota	4	Wisconsin	3
Mississippi	1	Wyoming	1
Missouri	4	Alaska	1
Montana	1	Hawaii	1
Nebraska	2	Isthmian Canal Zone	1
		Puerto Rico	1

The scientific sections of the American Medical Association, the Medical Corps of the Army, the Medical Corps of the Navy and the Public Health Service are entitled to one delegate each.

The Scientific Assembly of the Association will open with the General Scientific Meetings to be held Monday, June 21, starting at 2 p. m. and continuing throughout the morning and afternoon of Tuesday, June 22. The Inauguration Meeting at which the President will be installed will be held on Tuesday, June 22, starting at 8 p. m. The sections will meet Wednesday, Thursday and Friday, June 23, 24 and 25, as follows:

CONVENING AT 9 A. M. THE SECTIONS ON	CONVENING AT 2 P. M. THE SECTIONS ON
Pediatrics.	Internal Medicine.
Surgery, General and Abdominal.	Obstetrics and Gynecology.
Ophthalmology.	Laryngology, Otology and Rhinology.
Experimental Medicine and Therapeutics.	Pathology and Physiology.
Nervous and Mental Diseases.	Orthopedic Surgery.
Dermatology and Syphilology.	Urology.
Gastro-Enterology and Proctology.	Preventive and Industrial Medicine and Public Health.
Radiology.	Anesthesiology.
Miscellaneous Topics: Session on Allergy; Session on Diseases of the Chest; Session on Physical Medicine; Session on History of Medicine.	General Practice of Medicine.

The Registration Bureau, which will be located on the Navy Pier, will be open from 8:30 a.m. until 5:30 p.m. Monday, Tuesday, Wednesday and Thursday, June 21, 22, 23 and 24, and from 8:30 a.m. to 12 noon Friday, June 25.

EDWARD L. BORTZ, President.
ROY W. FOUTS, Speaker, House of Delegates.
GEORGE F. LULL, Secretary.

MEMBERS OF THE HOUSE OF DELEGATES

A Preliminary Roster of the Legislative Body of the American Medical Association

The list of members of the House of Delegates for the session is incomplete, as a number of the state associations are yet to hold their meetings at which delegates will be elected. The following is a list of the holdover members of the House of Delegates and of the newly elected members who have been reported to the Secretary in time to be included:

STATE DELEGATES

ALABAMA

A. A. Walker, Birmingham.
Lloyd Noland, Fairfield.

ARIZONA

Jesse D. Hamer, Phoenix.

ARKANSAS

Damon A. Rhinehart, Little Rock.

CALIFORNIA

H. Gordon MacLean, Oakland.
E. Vincent Askey, Los Angeles.
John W. Cline, San Francisco.
Donald Cass, Los Angeles.
Ralph B. Eusden, Long Beach.
Robertson Ward, San Francisco.
Samuel J. McClendon, San Diego.
Lowell S. Goin, Los Angeles.
John Winston Green, Vallejo.

COLORADO

William H. Halley, Denver.
George A. Unfug, Pueblo.

CONNECTICUT

Joseph H. Howard, Bridgeport.
Creighton Barker, New Haven.
Thomas P. Murdock, Meriden.

DELAWARE

James Beebe, Lewes.

DISTRICT OF COLUMBIA

Herbert P. Ramsey, Washington.
Courseen B. Conklin, Washington.

FLORIDA

Homer L. Pearson Jr., Miami.
Louis M. Orr II, Orlando.

GEORGIA

Olin H. Weaver, Macon.
Allen H. Bunce, Atlanta.
Benjamin H. Minchew, Waycross.

IDAHO

Hoyt B. Woolley, Idaho Falls.

ILLINOIS

Robert H. Hayes, Chicago.
Fred H. Muller, Chicago.
Mather Pfeiffenberger, Alton.
Edward H. Weld, Rockford.

INDIANA

Homer G. Hamer, Indianapolis.
Alfred S. Giordano, South Bend.
William M. Cockrum, Evansville.
Franklin S. Crockett, LaFayette.

IOWA

Gerald V. Coughlan, Council Bluffs.

KANSAS

Philip W. Morgan, Emporia.

KENTUCKY

Joshua B. Lukins, Louisville.
W. Clark Bailey, Harlan.

LOUISIANA

Val H. Fuchs, New Orleans.
James O. Graves, Monroe.

MAINE

Thomas A. Foster, Portland.

MARYLAND

Thomas S. Cullen, Baltimore.

MASSACHUSETTS

Charles J. Kickham, Brookline.
Leland S. McKittrick, Boston.

MICHIGAN

Wyman D. Barrett, Detroit.
Thomas K. Gruber, Eloise.
Claude R. Keyport, Grayling.
Leo G. Christian, Lansing.
William A. Hyland, Grand Rapids.

MINNESOTA

William A. Coventry, Duluth.
Alfred W. Adson, Rochester.
Erling W. Hansen, Minneapolis.
Frank J. Savage, St. Paul.

MISSISSIPPI

James P. Wall, Jackson.

MISSOURI

Robert E. Schlueter, St. Louis.
James R. McVay, Kansas City.
Howard B. Goodrich, Hannibal.
Warren L. Allee, Eldon.

MONTANA

Raymond F. Peterson, Butte.

NEBRASKA

Karl S. J. Hohlen, Lincoln.

NEVADA

Roland W. Stahr, Reno.

NEW HAMPSHIRE

Deering G. Smith, Nashua.

NEW JERSEY

J. Wallace Hurff, Newark.
Thomas K. Lewis, Camden.
Hilton S. Read, Ventnor.
Joseph F. Loudrigan, Hoboken.
William F. Costello, Dover.

NEW YORK

Walter P. Anderton, New York.
Herbert H. Bauchus, Buffalo.
Albert E. R. Andresen, Brooklyn.
Thomas M. Brennan, Brooklyn.
James R. Reuling, Bayside.
Floyd S. Winslow, Rochester.
Ralph T. B. Todd, Tarrytown.
Oliver W. H. Mitchell, Syracuse.
Edward P. Flood, New York.
Albert A. Gartner, Buffalo
John J. Masterson, Brooklyn.
J. Stanley Kenney, New York.
Thomas A. McGoldrick, Brooklyn.
Andrew A. Eggston, Mount Vernon.
Harry Aranow, Bronx.
Peter J. DiNatale, Batavia.
George W. Kosmak, New York.
Stephen R. Monteith, Nyack.
Joseph P. Henry, Rochester.
Scott Lord Smith, Poughkeepsie.

OHIO

L. Howard Schriver, Cincinnati.
Clifford C. Sherburne, Columbus.

OKLAHOMA

Charles B. Rountree, Oklahoma City.

OREGON

Raymond M. McKeown, Coos Bay.
Edward H. McLean, Oregon City.

PENNSYLVANIA

William Bates, Philadelphia
Francis F. Borzell, Philadelphia.
Walter F. Donaldson, Pittsburgh.
Charles L. Shafer, Kingston.
William L. Estes Jr., Bethlehem.
Elmer Hess, Erie.
James Z. Appel, Lancaster.
E. Roger Samuel, Mount Carmel.
James L. Whitehill, Rochester
George S. Klump, Williamsport.

RHODE ISLAND

Herman A. Lawson, Providence.

SOUTH CAROLINA

Hugh P. Smith, Greenville.

TENNESSEE

Hiram B. Everett, Memphis.

TEXAS

Howard R. Dudgeon, Waco.
Britton E. Pickett Sr., Corpus Christi.
Edward H. Cary, Dallas.

UTAH

James P. Kerby, Salt Lake City.

VERMONT

Theodore H. Harwood, Burlington.

VIRGINIA

J. Morrison Hutcheson, Richmond.
Henry B. Mulholland, Charlottesville.

WASHINGTON

Raymond L. Zech, Seattle.
Donald G. Corbett, Spokane

WEST VIRGINIA

Walter E. Vest, Huntington.
Ivan Fawcett, Wheeling.

WISCONSIN

Stephen E. Gavin, Fond du Lac.
James C. Sargent, Milwaukee.
William D. Stovall, Madison.

WYOMING

George P. Johnson, Cheyenne.

PUERTO RICO

Carlos E. Munoz-MacCormick, Santurce.

DELEGATES FROM THE SECTIONS AND GOVERNMENT SERVICES

INTERNAL MEDICINE

Charles T. Stone, Galveston, Texas.

SURGERY, GENERAL AND ABDOMINAL

Grover C. Penberthy, Detroit.

OBSTETRICS AND GYNECOLOGY

Jean Paul Pratt, Detroit.

OPHTHALMOLOGY

Arthur J. Bedell, Albany, N. Y.

LARYNGOLOGY, OTOLOGY AND RHINOLOGY

Burt R. Shurly, Detroit.

PEDIATRICS

William Weston, Columbia, S. C.

EXPERIMENTAL MEDICINE AND THERAPEUTICS

Edgar V. Allen, Rochester, Minn.

PATHOLOGY AND PHYSIOLOGY

Leonard W. Larson, Bismarck, N. D.

NERVOUS AND MENTAL DISEASES

Hans H. F. Reese, Madison, Wis.

DERMATOLOGY AND SYPHILOLOGY

Cornelius F. Lohmann, San Antonio, Texas.

PREVENTIVE AND INDUSTRIAL MEDICINE AND PUBLIC HEALTH

Stanley H. Osborn, Hartford, Conn.

UROLOGY

Roy B. Nealine, New York.

ORTHOPEDIC SURGERY

Edward L. Compere, Chicago.

GASTRO-ENTEROLOGY AND PROCTOLOGY

Louis A. Buie, Rochester, Minn.

RADIOLOGY

Byrl R. Kirklin, Rochester, Minn.

ANESTHESIOLOGY

Henry S. Ruth, Haverford, Pa.

GENERAL PRACTICE OF MEDICINE

Howard E. Griffin, Graham, Texas.

UNITED STATES ARMY

George E. Armstrong.

UNITED STATES NAVY

Norton D. Willcutts.

OFFICERS OF THE AMERICAN MEDICAL ASSOCIATION 1947—1948

PRESIDENT Edward L. Bortz, Philadelphia.

PRESIDENT ELECT R. L. Sensenich, South Bend, Ind.

VICE PRESIDENT Thomas A. McGoldrick, Brooklyn.

SECRETARY AND GENERAL MANAGER George F. Lull, Chicago.

TREASURER - J. J. Moore, Chicago.

SPEAKER, HOUSE OF DELEGATES - R. W. Fouts, Omaha.

VICE SPEAKER, HOUSE OF DELEGATES - F. F. Borzell, Philadelphia.

EDITOR Morris Fishbein, Chicago.

BUSINESS MANAGER - Thomas R. Gardiner Chicago.

BOARD OF TRUSTEES - William F. Braasch, Rochester, Minn., 1949; Ernest E. Irons, Secretary, Chicago, 1948; Louis H. Bauer, Hempstead, N. Y., 1949; E. L. Henderson, Chairman, Louisville, Ky., 1949; John H. Fitzgibbon, Portland, Ore., 1950; James R. Miller, Hartford, Conn., 1950; W. H. Johnson, Winston-Salem, N. C., 1948; Dwight H. Murray, Napa, Calif., 1952; E. J. McCormick, Toledo, Ohio, 1952.

JUDICIAL COUNCIL - John H. O'Shea, Spokane, Wash., 1948; Edward R. Cunniffe, Chairman, New York, 1949; Louis A. Buie, Rochester, Minn., 1950; Walter F. Donaldson, Pittsburgh, 1951; H. L. Pearson Jr., Miami, 1948; George F. Lull, Chicago, Secretary.

COUNCIL ON MEDICAL EDUCATION AND HOSPITALS - Harvey B. Stone, Baltimore, 1948; Reginald Fitz, Boston, 1949; Russell L. Haden, Cleveland, 1950; W. S. Middleton, Madison, Wis., 1951; H.G. Weishaupt, Chairman, Syracuse, N. Y., 1952; Victor Johnson, Rochester, Minn., 1953; Virgil P. Sydenstricker, Augusta, Ga., 1948; Donald G. Anderson, Secretary, Chicago.

COUNCIL ON SCIENTIFIC ASSEMBLY - L. B. Jackson, San Antonio, Texas, 1948; Charles H. Phifer, Chicago, 1949; Henry R. Viets, Chairman, Boston, 1950; L. M. Larson, Bismarck, N.D., 1951; Stanley P. Reimann, Philadelphia, 1952, and ex officio the President-Elect, the Editor and the Secretary of the Association.

COUNCIL ON MEDICAL SERVICE—Alfred W. Adson, Rochester, Minn., 1948; Walter B. Martin, Norfolk, Va., 1948; Elmer Hess, Erie, Pa., 1949; Thomas A. McGoldrick, Brooklyn, 1949; Jesse D. Hamer, Phoenix, Ariz., 1950; James H. McVay, Chairman, Kansas City, Mo., 1950; H. H. Shoulders, Nashville, Tenn.; Edward L. Bortz, Philadelphia; E. J. McCormick, Toledo, Ohio; George F. Lull, Chicago; Thomas A. Hendricks, Secretary, Chicago.

COUNCIL ON PHARMACY AND CHEMISTRY (Standing Committee of Board of Trustees)—James P. Leake, Washington, D.C., 1949; D. P. Barr, New York, 1949; W. B. Wood Jr., St. Louis, 1949; N. Fishbein, Chicago, 1950; G. W. McCoy, New Orleans, 1950; P. H. Long, Baltimore, 1950; E. M. Nelson, Washington, D.C., 1950; Torald Sollmann, Chairman, Cleveland, 1951; Isaac Starr, Philadelphia, 1951; R. F. Loeb, New York, 1951; E. M. K. Geiling, Chicago, 1952; S. W. Clausen, Rochester, N.Y., 1952; Paul R. Cannon, Chicago, 1952; E. D. Churchill, Boston, 1953; Joseph Stokes Jr., Philadelphia, 1953; C. Guy Lane, Boston, 1953; Robert T. Stormont, Washington, D. C., 1953; Austin E. Smith, Secretary, Chicago.

COUNCIL ON PHYSICAL MEDICINE (Standing Committee of Board of Trustees)—H. B. Williams, New York, 1949; Frank H. Krusen, Rochester, Minn., 1949; Anthony C. Cipollaro, New York, 1950; M. A. Bowie, Bryn Mawr, Pa., 1950; G. M. Piersol, Philadelphia, 1950; W. E. Garrey, Nashville, Tenn., 1951; W. W. Coblentz, Washington, D. C., 1951; John S. Coulter, Chairman, Chicago, 1951; Derrick Vail, Chicago, 1951; O. E. Grove, Milwaukee, 1951; A. C. Ivy, Chicago, 1952; Frank R. Ober, Boston, 1952; Frank D. Dickson, Kansas City, Mo., 1952; Morris Fishbein, ex officio, Chicago; Howard A. Carter, Secretary, Chicago.

COUNCIL ON FOODS AND NUTRITION (Standing Committee of Board of Trustees)—C. S. Ladd, Washington, D.C., 1949; John B. Youmans, Chicago, 1949; Harold C. Stuart, Boston, 1950; Morris Fishbein, Chicago, 1950; R. M. Wilder, Rochester, Minn., 1951; Howard B. Lewis, Ann Arbor, Mich., 1951; J. S. McLester, Chairman, Birmingham, Ala., 1951; Philip C. Jeans, Iowa City, 1952; C. A. Elvehjem, Madison, Wis., 1952; William J. Darby, Nashville, Tenn., 1953; George R. Cowgill, New Haven, Conn., 1953; James R. Wilson, Secretary, Chicago.

COUNCIL ON INDUSTRIAL HEALTH (Standing Committee of Board of Trustees)—Rutherford T. Johnstone, Los Angeles, 1949; A. J. Lanza, Chairman, New York, 1949; C. D. Selby, Detroit, 1949; Warren F. Draper, Washington, D. C., 1950; Raymond Hussey, Detroit, 1950; Henry H. Kessler, Newark, N. J., 1950; L. D. Bristol, Augusta, Maine, 1951; Paul B. Magnuson, Washington D.C., 1951; Robert A. Kehoe, Cincinnati, 1951; Harold A. Vonachen, Peoria, 1952; W. A. Sawyer, Rochester, N. Y., 1952; James S. Simmons, Boston, 1952; E. J. McCormick, ex officio, Toledo, Ohio; C. M. Peterson, Secretary, Chicago.

COUNCIL ON NATIONAL EMERGENCY MEDICAL SERVICE (Standing Committee of Board of Trustees)—James C. Sargent, Chairman, Milwaukee; Richard L. Meiling, Secretary, Columbus, Ohio; W. Mck. Craig, Rochester, Minn.; Harold S. Diehl, Minneapolis; Perrin H. Long, Baltimore; Harold C. Lueth, Omaha; Stafford Warren, Los Angeles; and ex officio Edward L. Bortz, Philadelphia; George F. Lull, Chicago.

COMMITTEE ON SCIENTIFIC EXHIBIT—E. J. McCormick, Toledo, Ohio; Dwight H. Murray, Chairman, Napa, Calif.; James R. Miller, Hartford, Conn.; Thomas G. Hull, Director, Chicago; Advisory Committee—Howard F. Root, Boston; Paul J. Hanzlik, San Francisco; Ludvig Hektoen, Chicago; Urban Maes, New Orleans; Max M. Peet, Ann Arbor, Mich.; James P. Leake, Washington, D.C.

CHICAGO—1948

The center of activities of the 1948 Annual Session will be the great Navy Pier, which extends nearly a mile into Lake Michigan from the foot of Grand Avenue and is less than a mile from the headquarters office of the Association. The entire pier is being developed into halls and exhibit rooms so that a considerable number of the scientific sessions, the registration bureau and the complete scientific and technical exhibits will be housed on the pier. The pier is 292 feet wide and is capable of accommodating thousands of persons comfortably for convention purposes.

The visitor to the Annual Session will enter the pier, which is easily accessible by the streetcar, motorbus or taxi, and will register in the usual manner at a special registration desk. He will then pass through the technical exhibits, which will represent more than three hundred exhibitors, and then through the scientific exhibits, more numerous and occupying a larger space than ever before except at the Centennial Session in Atlantic City, N. J., last year. A complete description of these exhibits appears elsewhere in this issue. After passing through the scientific exhibits the visitor will reach some of the large halls which have been designed for lectures and motion pictures and for the section meetings.

During its history of more than a hundred years the American Medical Association has met frequently in Chicago. More recent previous sessions have been 1919, 1924 and 1944. For most American physicians any detailed discussion of Chicago and its facilities is hardly necessary. The development of Chicago in art, finance, science, manufacturing and as a medical center is phenomenal. Its access to railroad, air and other transportation is more direct than that of any other city in the country.

Chicago Hotels

The visitor to this session need have no fear as to proper hotel accommodations. Although the large centrally located hotels can accommodate many thousands, they are already being taxed to their capacity by reservations of prospective visitors. The city extends, however, many miles to the north, south and west, and there are great numbers of

hotels fronting on Lincoln Park and the lake toward the south which are just a few minutes by good transportation to the Loop. As will be noted elsewhere in this issue, the House of Delegates will hold its meetings at the Palmer House. The Inauguration Meeting is scheduled for the Hotel Stevens. The Woman's Auxiliary will meet at the La Salle Hotel. Many of the special societies which will be meeting in Chicago either before or after the Annual Session are scheduled for other hotels. North of the Chicago River, the Sheraton Hotel is accommodating some of the section meetings.

It is suggested that if hotel reservations have not yet been secured by Fellows who expect to attend the Chicago session, such Fellows write directly to Dr. Fred H. Muller, 105 West Madison Street, Room 1707, Chicago 2.

Features of Medical Interest

Chicago provides numerous features of special medical interest. The medical schools are known throughout the world. The University of Chicago, University of Illinois (which includes Rush Medical College), Northwestern University and Loyola University medical schools have many thousands of alumni who will be renewing acquaintanceship with their alma maters. The facilities of Cook County Hospital and many other great hospitals in the Chicago area will be of interest to the physicians from all over the world who are planning to attend this session. Research institutions include those at the University of Chicago, Michael Reese Hospital, the Hektoen Institute of the Cook County Hospital and Children's Memorial Hospital. The Health Department of Chicago will offer opportunity to study its methods and will make available visits to institutions under municipal control, including the contagious hospitals and the Municipal Tuberculosis Sanitarium.

HEADQUARTERS OF THE AMERICAN MEDICAL ASSOCIATION

Fellows are cordially invited to visit the headquarters of the American Medical Association, 535 North Dearborn Street, corner of Dearborn Street and Grand Avenue, at any time during the Annual Session, June 21 to 25, from 8:30 a.m. to 4:30 p.m.

How to Reach the Headquarters of the American Medical Association

For physicians staying at hotels in the Loop, access to the headquarters of the Association is easy by bus, subway or streetcar. Via bus, board a north bound bus on Michigan Boulevard, ride to Grand Avenue and walk four blocks west. Via subway, enter any subway station on State Street, ride north to Grand Avenue and on leaving the subway walk one block west. Via streetcar, board any streetcar on State Street north bound numbered "6" or "36", ride to Grand Avenue and walk one block west, or board any streetcar on Clark Street north bound to Grand Avenue and walk one block east.

For physicians stopping at hotels on the north side of the city, the headquarters may be reached as follows: Via bus, take a south bound bus to Grand Avenue and walk four blocks west; via subway, ride south to Grand Avenue and on leaving the subway walk one block west; via streetcar, board a State Street car south bound to Grand Avenue and then walk one block west, or board Clark Street car south bound to Grand Avenue and walk one block east.

Activities of Association

The American Medical Association Building is a nine story stone structure housing all activities of the Association, including its printing plant. For the benefit of visiting Fellows, there is available a staff of guides familiar with the functions of the Association. In addition to the printing plant, including a press room, composing room, mailing room and bindery, which occupy the first three floors and basement, the departments include the Bureau of Medical Economic Research; Bureau of Legal Medicine and Legislation; Bureau of Exhibits; Council on Medical Service; Council on Industrial Health; Council on Pharmacy and Chemistry; Council on Physical Medicine; Council on Foods and Nutrition; Chemical Laboratory; Bureau of Health Education; Bureau of Investigation; Council on Medical Education and Hospitals; Directory Department, including a biographic index of physicians; Hygeia Circulation Department; Office of the Secretary and General Manager; Office of the Business Manager; Advertising Department; Accounting Department; Fellowship, Membership and Subscription Department; Cooperative Medical Advertising Bureau; Office of the Editor; Editorial Department, including News Department, Foreign Abstracting Department, Manuscript Editing Department, Hygeia Editorial Office and Library; Assembly Room, and Board of Trustees Room.

A.M.A. HEADQUARTERS
535 NORTH DEARBORN STREET

Too limited a number of Fellows of the American Medical Association are aware of the facilities available at the headquarters of the Association for carrying on its work, including the physical equipment for the printing of THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION; the special journals, namely, *American Journal of Diseases of Children, Archives of Dermatology and Syphilology, Archives of Internal Medicine, Archives of Neurology and Psychiatry, Archives of Ophthalmology, Archives of Otolaryngology, Archives of Pathology, Archives of Surgery* and *Occupational Medicine, Hygeia,* American Medical Directory; *Quarterly Cumulative Index Medicus,* and by-products of THE JOURNAL and of the Press of the American Medical Association.

While it is realized that those who attend the Annual Session of the American Medical Association will be pretty well occupied, it is hoped that each of them will find at least one hour during the week for visiting the Headquarters of the Association to see for himself something of the work that is being done

V 13
1948

REGISTRATION

The Bureau of Registration will be located on the Navy Pier. An information bureau will be operated in connection with the Bureau of Registration.

Who May Register

Only Fellows, Affiliate, Associate and Honorary Fellows and Invited Guests may register and take part in the work of the sections. Fellows of the Scientific Assembly are those who have, on the prescribed form, applied for Fellowship, subscribed to THE JOURNAL and paid their Fellowship dues for the current year. Fellowship dues and subscription to THE JOURNAL are included in the one annual payment of $12, which is the regular subscription price of THE JOURNAL. Fellowship cards are sent to all Fellows after payment of annual dues, and these cards should be presented at the registration window. Any who have not received cards for 1948 should secure them at once by writing to the American Medical Association, 535 North Dearborn Street Chicago 10.

Members in Good Standing Eligible to Apply for Fellowship in the Association

Members in good standing in the American Medical Association are those members of component county medical societies and of constituent state and territorial medical associations whose names are officially reported for enrolment to the Secretary of the American Medical Association by the secretaries of the constituent medical associations. All members in good standing may apply for Fellowship in the Scientific Assembly and are urged to qualify as Fellows before leaving home in order that pocket cards may be secured and brought to Chicago so that registration can be more easily and more promptly effected.

Application forms may be had on request.

Those subscribers to THE JOURNAL who have not received pocket cards for 1948 should write to the American Medical Association in order to obtain application blanks and information as to further requirements.

Register Early

Fellows living in Chicago as well as all other Fellows who are in Chicago on Monday and Tuesday, should register as early as possible.

The names and local addresses of those who register will be included in the issue of the *Daily Bulletin* appearing the next day, and this will enable visiting physicians to find friends who have registered.

Suggestions That Will Facilitate Registration

Fellows should fill out completely the spaces on both sections of the front of the registration card. Physicians who desire to qualify as Fellows should fill out completely the spaces on both sections of the front of the registration card and sign the application on the back. These cards will be found on the tables.

Entries on the registration card should be written plainly, or printed, as the cards are given to the printer to use as "copy" for the *Daily Bulletin*, which appears on Tuesday, Wednesday, Thursday and Friday mornings during the week of the session.

Fellows who have their pocket cards with them can be registered with little or no delay. They should present the filled out registration card, together with the pocket card, at one of the windows marked "Registration by Pocket Card." There the clerk will compare the two cards, stamp the pocket card and return it and supply the Fellow with a badge and a copy of the official program

As previously stated, it will assist in the registration if those who desire to qualify as Fellows will file their applications and qualify as Fellows by writing directly to the American Medical Association, 535 North Dearborn Street, Chicago 10, so that their Fellowship may be entered not later than May 22. Any applications that are received later than May 22 will be given prompt attention, but the Fellowship pocket card may not reach the applicant in time for him to register at the Chicago session.

It will be possible for members of the organization to qualify as Fellows at Chicago. In order to do this, applicants for Fellowship will be required to fill out both sections of the front of the registration card and to sign the formal application that is printed on the reverse side of the card. It is suggested that those members who apply for Fellowship at Chicago bring with them their state membership cards for the year 1948. The state membership card should be presented along with the filled in registration card at the window in the booth marked "Applicants for Fellowship and Invited Guests."

As already stated, registration can be effected more easily and promptly if members will qualify as Fellows before leaving home.

Registration for General Officers and Delegates at the Palmer House

General Officers of the American Medical Association and members of the House of Delegates may register for the Scientific Assembly outside the Red Lacquer Room of the Palmer House. This arrangement is made for the convenience of members of the House of Delegates, which will convene on Monday morning at 10 o'clock in the Red Lacquer Room of the Palmer House. Delegates are requested to register for the Scientific Assembly before presenting credentials to the Reference Committee on Credentials of the House of Delegates. Registration of delegates for the Scientific Assembly will begin at 8 o'clock Monday morning, June 21, and delegates are urged to register early so that all members of the House of Delegates may be seated in in time for the opening session of the House.

TRANSPORTATION

It is suggested that those Fellows who contemplate traveling to Chicago to attend the annual session of the Association secure information concerning railroad and airplane travel directly from their local ticket agents, who are in a position to give them information regarding train or plane schedules and fares.

MEETING PLACES

HOUSE OF DELEGATES: Red Lacquer Room, Palmer House, 15 East Monroe Street.

GENERAL SCIENTIFIC MEETINGS: Auditorium, Navy Pier.

INAUGURATION MEETING: Ballroom, Stevens Hotel, 720 South Michigan Avenue.

GENERAL HEADQUARTERS, REGISTRATION BUREAU, SCIENTIFIC EXHIBIT, TECHNICAL EXHIBITS AND INFORMATION BUREAU: Navy Pier.

NAVY PIER WHERE MANY SECTION MEETINGS WILL BE HELD. ALSO REGISTRATION AND THE EXHIBITS.

SECTIONS OF SCIENTIFIC ASSEMBLY

INTERNAL MEDICINE: Auditorium, Navy Pier.

SURGERY, GENERAL AND ABDOMINAL: Ballroom, Sheraton Hotel, 505 North Michigan Avenue.

OBSTETRICS AND GYNECOLOGY: Ballroom, Sheraton Hotel, 505 North Michigan Avenue.

OPHTHALMOLOGY: Thorne Hall, Northwestern University, 710 Lake Shore Drive.

LARYNGOLOGY, OTOLOGY AND RHINOLOGY: Thorne Hall, Northwestern University, 710 Lake Shore Drive.

PEDIATRICS: Auditorium, Navy Pier.

EXPERIMENTAL MEDICINE AND THERAPEUTICS: Room 4, Navy Pier.

PATHOLOGY AND PHYSIOLOGY: Room 4, Navy Pier.

NERVOUS AND MENTAL DISEASES: Room 3, Navy Pier.

DERMATOLOGY AND SYPHILOLOGY: Room 1, Navy Pier.

PREVENTIVE AND INDUSTRIAL MEDICINE AND PUBLIC HEALTH: Room 5, Navy Pier.

UROLOGY: Room 1, Navy Pier.

ORTHOPEDIC SURGERY: Room 3, Navy Pier.

GASTRO-ENTEROLOGY AND PROCTOLOGY: Room 5, Navy Pier.

RADIOLOGY: Boulevard Room, Sheraton Hotel.

ANESTHESIOLOGY: Boulevard Room, Sheraton Hotel.

GENERAL PRACTICE OF MEDICINE: Room 2, Navy Pier.

MISCELLANEOUS TOPICS: Session on Allergy, Session on Diseases of the Chest and Session on History of Medicine: Room 2, Navy Pier. Session on Physical Medicine: Assembly Room, Building of the American Medical Association, 535 North Dearborn Street.

LOCAL COMMITTEE ON ARRANGEMENTS

Warren W. Furey, General Chairman

Vice Chairmen

Percy E. Hopkins — J. Roscoe Miller

Secretaries

Harold M. Camp — Willard O. Thompson

General Committee

Henry T. Ricketts
Herbert E. Schmitz
John R. Lindsay
Carl A. Dragstedt
Oscar Hawkinson
Roland R. Cross
Edward L. Compere
Earl E. Barth
H. Kenneth Scatliff
F. Lee Stone
Hugh N. MacKechnie
Wade C. Harker
Edwin S. Hamilton
Everett Coleman
Charles E. Shannon
Warren H. Cole
G. Henry Mundt
Julius H. Hess
J. J. Moore
Harry M. Hedge
Norris J. Heckel
F. C. Val Dez
W. Allen Conroy
J. S. Coulter
James P. Simonds
Fred H. Muller
Walter D. Stevenson
Percy E. Hopkins
Robert S. Berghoff
Malcolm T. MacEachern
Richard F. Greening

Subcommittee on Sections and Section Work

INTERNAL MEDICINE:

Henry T. Ricketts, Chairman
Robert W. Keeton
Newell C. Gilbert
I. F. Volini
Ernest G. McEwen
George H. Coleman
George F. O'Brien

SURGERY, GENERAL AND ABDOMINAL:

Warren H. Cole, Chairman
Lester R. Dragstedt
John L. Keeley
Norris L. Parker
Foster L. McMillan
H. A. Oberhelman
Michael L. Mason
Charles Puestow
Oscar E. Nadeau

OBSTETRICS AND GYNECOLOGY:

Herbert E. Schmitz, Chairman

H. Close Hesseltine — Joseph L. Baer
Ralph A. Reis — Aaron E. Kanter
John I. Brewer — Paul E. Lawler
Frederick A. Falls

OPHTHALMOLOGY:

G. Henry Mundt, Chairman

Beulah Cushman — J. R. Fitzgerald
Derrick Vail

LARYNGOLOGY, OTOLOGY AND RHINOLOGY:

John R. Lindsay, Chairman

Lawrence J. Lawson — Francis L. Lederer
Walter H. Theobald

PEDIATRICS:

Julius H. Hess, Chairman

E. T. McEnery — John L. Reichert
Edmund G. Lawler — H. W. Elghammer
Alvah L. Newcomb

EXPERIMENTAL MEDICINE AND THERAPEUTICS:

Carl A. Dragstedt, Chairman

Henry L. Schmitz — Frank Wright

PATHOLOGY AND PHYSIOLOGY:

J. J. Moore, Chairman

Granville A. Bennett — J. F. Sheehan
William B. Wartman — Paul Cannon
George Milles — Otto Saphir
Frank Cohen — A. C. Ivy

NERVOUS AND MENTAL DISEASES:

Oscar Hawkinson, Chairman

Clarence J. Neymann — Alex J. Arieff
Roland P. MacKay — John J. Madden
Francis J. Gerty

DERMATOLOGY AND SYPHILOLOGY:

Harry M. Hedge, Chairman

Samuel M. Bluefarb — Marcus R. Caro
Theodore Cornbleet — Stephen Rothman
Cleveland J. White — Leonard F. Weber

PREVENTIVE AND INDUSTRIAL MEDICINE AND PUBLIC HEALTH:

Roland R. Cross, Chairman

Edward A. Piszczek — C. O. Sappington
Joseph H. Chivers — John R. Vonachen
Dwight I. Gearhart

UROLOGY:

Norris J. Heckel, Chairman

William J. Baker — Irving J. Shapiro
Harry J. Dooley — Harry C. Rolnick
James I. Farrell — Charles B. Huggins
James W. Merricks

ORTHOPEDIC SURGERY:

Edward L. Cospere, Chairman

Harold A. Sofield — Manley A. Page
Philip Lewin — Fremont A. Chandler
John J. Fahey

GASTRO-ENTEROLOGY AND PROCTOLOGY:

F. C. Val Dez, Chairman
L. C. Gatewood, Vice Chairman

Walter L. Palmer — L. D. Snorf
G. V. Pontius — J. P. Nesselrod
Clement L. Martin

RADIOLOGY:

Earl E. Barth, Chairman

Robert A. Arens — Fred H. Decker
Edward L. Jenkinson — Fay H. Squire
Theodore J. Wachowski — Ralph G. Willy
Cesare Gianturco

ANESTHESIOLOGY:

W. Allen Conroy, Chairman

Mary F. Poe

GENERAL PRACTICE OF MEDICINE:

H. Kenneth Scatliff, Chairman

R. C. Aiken — J. William Davis
J. J. Jurgens — Arthur C. Taylor
Edward C. Helfers

MISCELLANEOUS TOPICS: Session on Allergy; Session on Diseases of the Chest; Session on History of Medicine; Session on Physical Medicine:

J. S. Coulter, Chairman

D. J. Davis — Edward T. Tatge

Subcommittee on Registration

F. Lee Stone, Chairman
Frank Deneen, Co-Chairman

Karl L. Vehe — S. J. Sullivan
Robert R. Mustell — John C. Wall
William D. Jack — Casper M. Epsteen
Walter A. Lawrence — Charles H. Hulick
E. H. Blair — Joseph C. Sodaro
Jerome M. Brosman — M. I. Kaplan

Subcommittee on Scientific Exhibit

James P. Simonds, Chairman
Charles P. Blair, Co-Chairman

Charles Drueck Jr. — H. L. Wallin
Frank G. Murphy — L. J. Hughes
H. E. Davis — A. L. Burdick
Ben E. Fillis — Richard M. Davison
Frank F. Maple — J. Roscoe Harry

Subcommittee on Finance

Hugh N. MacEachnie, Chairman
Edward H. Weld, Co-Chairman

Edward H. Ochsner — A. J. Linowiecki
W. J. Gillesby — P. H. McNulty
Jacob L. Albright

Subcommittee on Hotels

Fred H. Muller, Chairman

Harlan A. English, Co-Chairman

Pliny R. Blodgett — E. V. McCarthy
Yorke B. Sutch — Gustav L. Kaufmann
R. C. Oldfield — Thomas F. Ahearn
L. S. Tichy — William J. Blackwell
F. W. Slobe

Subcommittee on Information

Wade C. Harker, Chairman

G. C. Otrich, Co-Chairman

Bernard P. Conway — Warren C. Blin
J. C. Redington — Julius E. Fleischner
Fred L. Glenn — B. K. Lazarski
B. Bousa — M. M. Wasick
Lorne W. Mason — Ariel L. Williams
Harry A. Olin — Harold W. Miller
Carl F. Steinhoff — B. W. Breistor

Subcommittee on Publicity and Printing

H. Kenneth Scatliff, Chairman

W. I. Lewis, Co-Chairman

Craig D. Butler — John P. O'Neil
George W. Parker — C. C. Saelhof
I. S. Trostler

Subcommittee on Transportation

Walter D. Stevenson, Chairman

James H. Hutton, Co-Chairman

Charles R. Roth — Roy M. Hutchison
John T. Gregorio — Robert H. Hayes
F. Garn Norbury — Frank S. Needham
Paul M. Blackburn — W. S. Bougher
William A. Mann — Albert Michow

Subcommittee on Entertainment

Edwin S. Hamilton, Chairman
H. Prather Saunders, Co-Chairman

O. W. Rest — Walter C. Hammond
S. M. Goldberger — M. M. Hoeltgen
Joseph A. Fororich — James W. Merricks
W. J. Kutza

Subcommittee on House of Delegates Dinner

Percy E. Hopkins, Chairman
J. Roscoe Miller, Co-Chairman

G. E. Johnson — Leo P. A. Sweeney
Walter C. Hornemier — Anders J. Weigen
Frank H. Fowler — Stanley C. Fahlstrom
Hollo k. Packard — Clarence K. Jones
Darwin B. Pond

Subcommittee on Inauguration Meeting

Everett R. Coleman, Chairman
Charles H. Phifer, Co-Chairman

Ralph Pearrs — O. W. Konzelman
Harry J. Dooley — Clifford J. Barborka

Subcommittee on President's Reception

Robert S. Berghoff, Chairman
Irving H. Neece, Co-Chairman

William E. O'Neil — Henry C. Sweany
Paul C. Bucy — John R. Wolff
Andy Hall — William C. Doepp
Reid O. Howser

Subcommittee on Golf

Charles E. Shannon, Chairman

Subcommittee on Entertainment of Foreign Guests

Malcolm T. MacEachern, Chairman
Mather Pfeiffenberger, Co-Chairman

James T. Case — H. M. Leaf
Francis W. Young — H. L. Pettitt
Lawrence F. Draper — Charles H. Parkes
John E. Siedlinski — Kyle Hawkins

Subcommittee on Clubs and Alumni Reunions

Richard F. Greening, Chairman

C. O Lane, Co-Chairman

A. M. Vaughn — Gerard N. Krost
John H. Gilmore — Howard B. Carroll
John D. Singer

ENTERTAINMENT

Conference of County Society Officers

There will be a conference of county medical society officers on Sunday, June 20, at 2:30, in the Red Lacquer Room of the Palmer House. It will be conducted in round table fashion with Dr. A. M. Mitchell of Terre Haute, Ind., as moderator. Fellows are invited to attend this conference.

Dinner for Delegates

A dinner is being arranged for Monday, June 21, for members of the House of Delegates and officers of the Association. Complete information concerning the dinner will be available at the first meeting of the House of Delegates on Monday morning, June 21.

Luncheon for Delegates

A luncheon for the members of the House of Delegates and the officers of the American Medical Association is being planned for Tuesday noon, June 22, between the morning and afternoon meetings of the House of Delegates at the Palmer House.

Installation of President

The Inauguration Meeting at which the President will be installed will be held on Tuesday evening, June 22, in the Ballroom of the Hotel Stevens.

Breakfast for Vice Presidents

VICE PRESIDENTS' Breakfast, given by Dr. L. H. South, Tuesday, June 22, 8 a.m., Palmer House.

President's Reception and Ball

The President of the Association will be honored with a reception and ball to be held Thursday evening, June 24, at 9 o'clock in the Ballroom of the Palmer House.

Luncheons, Dinners and Meetings of other Organizations

ALPHA KAPPA KAPPA, Luncheon, Wednesday, June 23 in the Gothic Room of the Sheraton Hotel, 12:30 p.m.

ALPHA OMEGA ALPHA, Dinner, Thursday, June 24 in the Palmer House, 6:30 p. m.

ALUMNAE ASSOCIATION OF WOMAN'S MEDICAL COLLEGE OF PENNSYLVANIA, Dinner, Wednesday, June 23, at 7 o'clock in Windemere East Hotel, Regency Room, $4 a person. Reservations may be made through Dr. Doris Phillips, Michael Reese Hospital, Chicago.

ALUMNI ASSOCIATION OF LONG ISLAND COLLEGE OF MEDICINE, Cocktail Party, Wednesday, June 23, 5 to 7 p.m., Stevens Hotel, Chicago.

ALUMNI OF NORTHWESTERN UNIVERSITY MEDICAL SCHOOL, Luncheon, Thursday, June 24 at Thorne Hall, Northwestern University, 12 noon, $1.50 a person. Reservations may be made through the Medical Alumni Office, 303 East Chicago Avenue, Chicago 11.

ALUMNI ASSOCIATION OF UNIVERSITY OF LOUISVILLE, Wednesday, June 23.

AUGUSTANA HOSPITAL INTERNS ALUMNI REUNION, Banquet, La Salle Hotel, Wednesday, June 23, 6:30 p. m. $6 a plate.

CHRISTIAN MEDICAL SOCIETY, Convention Dinner, 6:00 p.m., Wednesday, June 23, Eitel Restaurant, Field Building, 135 South LaSalle Street. $3.50 a plate. Speaker, Dr. L. Nelson Bell.

CORNELL UNIVERSITY MEDICAL COLLEGE Alumni, Dinner, 7:00 p.m., Thursday, June 24, Palmer House. $6.00 a ticket.

FEDERATION OF CATHOLIC PHYSICIANS' GUILDS, Wednesday, June 23, Luncheon.

HARVARD MEDICAL SCHOOL ALUMNI ASSOCIATION, Dinner, Wednesday, June 23, 6:30 p.m., University Club, 76 East Monroe Street. Speakers will be Dean Burwell and Drs. Walter Bauer and Francis D. Moore.

IOTA CHAPTER OF PHI BETA PI, UNIVERSITY OF ILLINOIS CHAPTER, Stag Dinner, 7:30 p.m. Monday, June 21, Hotel La Salle, $6.00 a ticket.

LOYOLA UNIVERSITY ALUMNI ASSOCIATION, Dinner 6 p.m. Wednesday, June 23, Sheraton Hotel, $ 4.50 a plate.

PHI BETA PI FRATERNITY, Luncheon, La Salle Hotel, Wednesday, June 23, $4 a plate.

PHI DELTA EPSILON MEDICAL FRATERNITY, Luncheon, the Standard Club, 12:30 p. m. Wednesday, June 23, $2.25 a ticket.

PHI LAMBDA KAPPA MEDICAL FRATERNITY, Luncheon Reunion Meeting, Congress Hotel, Wednesday, June 23, 12:15 p. m.

PHI RHO SIGMA ALUMNI, Luncheon, Wednesday, June 23, 12:30 p. m., Chicago Yacht Club.

PRESBYTERIAN HOSPITAL, Intern-Resident Reunion, Dinner, Tuesday, June 22, 6:30 p. m., Congress Hotel, Casino Room. Reservations may be made through the Medical Director's Office of the Hospital.

RUSH MEDICAL ALUMNI ASSOCIATION, Luncheon, Wednesday, June 23, 12 noon, Palmer House. For advance reservation write Dr. Grant H. Laing, Secretary, 104 South Michigan, Chicago.

WOMAN'S AUXILIARY

A most cordial invitation is extended to all women who are Auxiliary members or guests of physicians attending the session of the American Medical Association to participate in all social functions and attend the general sessions. Whether Auxiliary members or not, the wives of physicians will be most welcome.

Auxiliary headquarters will be on the mezzanine floor of the Hotel LaSalle. All meetings and functions will be held at the Hotel LaSalle unless otherwise stated in the program or announced during the meeting. Please register early and obtain your badge and program of the social functions.

THE NEAR NORTHSIDE AT OAK STREET AND THE OUTER DRIVE.

THE CHICAGO SKYLINE ALONG MICHIGAN AVENUE LOOKING NORTH. THE HOTEL STEVENS IS THE FIRST BUILDING ON THE LEFT.

All tickets should be purchased soon after arrival. These will be sold only at the Auxiliary headquarters. All meetings and social affairs will begin at the time scheduled. Please be prompt.

REGISTRATION HOURS

Sunday.....2 p.m. to 4 p.m.
Monday.....9 a.m. to 4 p.m.
Tuesday.....9 a.m. to 4 p.m.
Wednesday.....9 a.m. to 4 p.m.

Preconvention Meetings

PROGRAM

SUNDAY, JUNE 20, 1948

COMMITTEE MEETINGS

2 to 4 p.m. Registration (mezzanine floor).

8 p.m. Finance Committee, Room B (mezzanine floor). Mrs. Scott C. Applewhite, chairman.

MONDAY, JUNE 21

9:30 a.m. Board of Directors, Room B (mezzanine floor). Presiding.....Mrs. Eustace A. Allen, President.

10 a.m. Nominating Committee, Room A (mezzanine floor). Mrs. David W. Thomas, chairman.

12:30 p.m. Luncheon of Board of Directors, Room C (mezzanine floor).

4 p.m. Tea in honor of Mrs. Eustace A. Allen, President, and Mrs. Luther H. Kice, President-Elect, Woman's Auxiliary to the American Medical Association, Century Room.

Tickets $1.25. All doctors' wives cordially invited.

Hostesses: Auxiliaries to the Illinois State Medical Society and to the Chicago Medical Society.

8 p.m. Revisions Committee Meeting, Room B (mezzanine floor). Mrs. Roscoe E. Mosiman, chairman.

TUESDAY, JUNE 22

9 a.m

Formal opening of the twenty-fifth annual meeting of the Woman's Auxiliary to the American Medical Association.

Illinois Room (mezzanine floor)

Presiding.....Mrs. Eustace A. Allen, President
Invocation.....Rev. Charles Ray Goff, D.D.
Pastor, Chicago Temple, First Methodist Church
Pledge of Loyalty to the Woman's Auxiliary to the American Medical Association..Mrs. Jesse D. Hamer

Greetings.....J. Roscoe Miller, M.D., President, Chicago Medical Society

Address of Welcome.....Mrs. John Soukup, Immediate Past President, Woman's Auxiliary to the Illinois State Medical Society

Response.....Mrs. Robert Flanders, President, Woman's Auxiliary to the New Hampshire Medical Society

Presentation of Convention Chairman, Mrs. Rollo K. Packard

Presentation of President-Elect, Mrs. Luther H. Kice

Introductions.....Mrs. Eustace A. Allen

Roll Call.....Mrs. George Turner, Constitutional Secretary

Minutes of the 24th Annual Meeting, Mrs. George Turner

Convention Rules of Order.....Mrs. John S. Bouslog

Credentials and Registration, Mrs. James M. McDonnough

Address of the President.....Mrs. Eustace A. Allen

REPORTS OF OFFICERS

President Elect.....Mrs. Luther H. Kice

First Vice President.....Mrs. David B. Allman

Second Vice President.....Mrs. Leo J. Schaefer

Third Vice President.....Mrs. E. Arthur Underwood

Fourth Vice President.....Mrs. W. W. Potter

Treasurer.....Mrs. Arthur A. Herold (including the report of the Auditor)

Constitutional Secretary.....Mrs. George Turner

12 m. Luncheon in honor of the Past Presidents of the Woman's Auxiliary to the American Medical Association, Grand Ballroom, nineteenth floor. Tickets $3.50. Mrs. Rollo K. Packard, past president, presiding.

Guest Speaker: Morris Fishbein, M.D., Editor, THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION and HYGEIA.

AFTERNOON SESSION

2 p.m.

Report of the Board of Directors, Mrs. Eustace A. Allen

Reports of Chairmen of Standing Committees:

Editorial.....Mrs. James P. Simonds

Finance.....Mrs. Scott C. Applewhite

Hygeia.....Mrs. Arthur I. Edison

Legislation.....Mrs. Bruce Schaefer

Organization.....Mrs. David B. Allman

Post-War Planning.....Mrs. Rollo K. Packard

Program.....Mrs. Ralph Eusden

Public Relations.....Mrs. Harold F. Wahlquist

Revisions.....Mrs. Roscoe E. Mosiman

Report of the Historian.....Mrs. Jesse D. Hamer

Report of the Central Office and Bulletin Circulation:.....Miss Margaret Wolfe

Report of the Nominating Committee (first reading) Mrs. David W. Thomas, Chairman

Election of the 1949 Nominating Committee.

4 p.m.

Round Table Discussion:

Hygeia.....Mrs. Arthur I. Edison

Legislation.....Mrs. Bruce Schaefer

Program.....Mrs. Ralph Eusden

Public Relations.....Mrs. Harold F. Wahlquist

8 p.m.

Inauguration Meeting of the American Medical Association, Grand Ballroom, Hotel Stevens, Members of the Woman's Auxiliary and guests are welcome.

WEDNESDAY, JUNE 23

9 a.m.

General Session of the Woman's Auxiliary to the American Medical Association, Illinois Room (mezzanine floor)

Presiding.....Mrs. Eustace A. Allen

Greetings.....Warren W. Furey, M.D., Chairman, Local Committee on Arrangements of the American Medical Association

Minutes.....Mrs. George Turner

Announcements.....Mrs. Rollo K. Packard

Credentials and Registration Mrs. James M. McDonnough

In Memoriam.....Mrs. Van Buren Philpot

Resolutions.....Mrs. Henry Garnjobst

Reports of state presidents.

12:30 p.m.

Annual Luncheon in honor of Mrs. Eustace A. Allen, president, and Mrs. Luther H. Kice, president-elect, Grand Ballroom, nineteenth floor. Tickets, $3.50. Mrs. Eustace A. Allen, presiding.

Guests of Honor: Dr. Edward L. Bortz, President; Dr. R. L. Sensenich, President-Elect; Dr. J. J Moore, Treasurer; Dr. George F. Lull, Secretary and General Manager; Dr. Morris Fishbein, Editor of THE JOURNAL and HYGEIA, and the members of the Advisory Council of the Woman's Auxiliary to the American Medical Association.

2:00 p.m.

Joint meeting of the Advisory Council of the Woman's Auxiliary to the American Medical Association and the Board of Directors of the Woman's Auxiliary.

AFTERNOON SESSION

2:30 p.m.

Unfinished Business

New Business

Report of the Nominating Committee Mrs. David W. Thomas

Election of Officers

Installation of Officers and Presentation of President's Pin.....Mrs. Frank N. Haggard

Inaugural Address.....Mrs. Luther H. Kice

Convention

Courtesy Resolutions....Mrs. Arthur J. McCarey

Minutes.....Mrs. George Turner

Adjournment

THURSDAY, JUNE 24

9:30 a.m.

Meeting of the Board of Directors, Room D (mezzanine floor)

6:30 p.m.

Annual Dinner of the Woman's Auxiliary for members, husbands and guests, Grand Ballroom, nineteenth floor. Tickets $4.

9 p.m.

Reception and Ball in honor of the President of the American Medical Association. Palmer House.

FRIDAY, JUNE 25

Exhibits at Navy Pier.

Local Committee on Convention Arrangements

Mrs. Rollo K. Packard, Chairman

Mrs. James P. Simonds.....Mrs. John Soukup
Mrs. Arthur I. Edison.....Mrs. L. N. Hamm
Mrs. G. Henry Mundt....Mrs. James McDonnough
Mrs. Lucius Cole.....Mrs. Henry L. Schmitz
Mrs. Nathaniel Baskind, Secretary-Treasurer

Chairmen of Subcommittees

Credentials and Registration:
Mrs. James G. W. Landon
Mrs. M. F. Stein
Mrs. A. H. Hallman
Mrs. H. D. Wallin

Information and Tour:
Mrs. Arthur I. Edison
Mrs. Samuel Plice
Mrs. Nicholas Dykstra
Mrs. Theodore Johnston

Tickets and Reservations:
Mrs. W. J. Wanninger
Mrs. Julius Ginsberg
Mrs. L. A. Hare
Mrs. Anders J. Weigen

Publicity: Mrs. G. T. Puttice

Messengers: Mrs. Roy M. Hutchinson

House: Mrs. O. J. Rabe

Reception:
Mrs. G. Henry Mundt
Mrs. Warren W. Furey
Mrs. Willard Thompson
Mrs. James P. Simonds
Mrs. Josiah J. Moore
Mrs. Morris Fishbein
Mrs. George F. Lull

Tea:
Mrs. James McDonnough
Mrs. Henry L. Schmitz
Mrs. John Soukup
Mrs. L. N. Hamm

Luncheon Tuesday:
Mrs. Henry L. Schmitz
Mrs. John A. Cousins
Mrs. C. Otis Smith

Luncheon Wednesday:
Mrs. Harold Miller
Mrs. Virgil L. VanStone
Mrs. I. Wynekoop

Dinner:
Mrs. M. M. Hipskind
Mrs. Morris I. Friedell
Mrs. John H. Glynn

Convention Committees

Election: Mrs. Fred Moore

Timekeepers:
Mrs. G. G. Woodruff
Mrs. T. Grover Amos

Reading Committee:
Mrs. James P. Simonds, Chairman
Mrs. George Turner
Mrs. David F. Adcock
Miss Margaret Wolfe

PHYSICIANS' ART EXHIBIT

The American Physicians Art Association will have exhibitions during the American Medical Association session in Chicago June 21 to 25, on the Navy Pier. Over two hundred cups will be awarded winners in the various types of art. For detailed information write to F. H. Redewill, M.D., Executive Secretary, 526 Flood Building, San Francisco 2.

GOLF TOURNAMENT

The American Medical Golfing Association will hold its thirty-second tournament on Monday, June 21. The famous, beautiful and sporty Olympia Fields has been reserved for the medical golfers' tournament. Dinner will be held in Olympia Fields C.C. Clubhouse, after which prizes will be awarded.

Two Eighteen-Hole Courses

Olympia Fields Country Club has two eighteen-hole courses which are ideal for experts and a treat for players with higher handicaps. Fellows may tee off between 7:30 a.m. and 2 p.m. Luncheon will be served at the club. The golfers' banquet will be held at 7 p.m. Entertainment will follow the awarding of prizes.

Trophies and Prizes

Trophies will be awarded for the Association championship (thirty-six holes), the Will Walter Trophy; the runner-up champion, the Detroit Trophy; the eighteen hole championship, the Golden State Trophy; the runner-up eighteen hole champion, Ben Thomas Trophy. The Section Event will include sterling silver pitchers for eight sections including internal medicine, surgery, gynecology and obstetrics, dermatology and syphilology, radiology, general practice, pediatrics, eye, ear, nose and throat, and urology. The first flight (0 to 13) will contain trophies and prizes for both gross and net in thirty-six and eighteen holes including the St. Louis Trophy, the President's Trophy, the Atlantic City Trophy and the Sperry Trophy. The second and third flights (14 to 18 and 19 to 30) will contain prizes for both thirty-six and eighteen holes; the maturity event (for Fellows 60 years and older), the Minneapolis Trophy; the Old Guard Championship, the Wendell Phillips Trophy. In addition to these, approximately seventy-five other prizes will be in competition.

Trophies Awarded at Recent Annual Tournaments of American Medical Golfing Association.

Ten trophies of the American Medical Golfing Association are on permanent display at the American Medical Association headquarters in Chicago.

in a case in the reception room to the right of the entrance.

In the back row in the picture are the Detroit Trophy for the runner-up champion thirty-six holes; the Golden State Trophy, which goes to the champion for the eighteen hole gross; the Minneapolis Trophy, top prize in the Maturity Event; the Will Walter Trophy for the Champion of the Field for the best thirty-six hole gross, and the Ben Thomas Trophy for the runner-up champion of the eighteen hole gross.

In the front row are the Wendell Phillips Trophy, emblematic of the "Old Guard Championship"; the Sperry Trophy, first flight, low net eighteen holes; the Atlantic City Trophy for the winner of the first flight low gross eighteen holes; the St. Louis Trophy, emblematic of first flight, low gross thirty-six holes, and the Wetherell Trophy, first flight, second low net, eighteen holes.

Chicago Committee on Arrangements

The Chicago Committee on Arrangements is under the chairmanship of Charles E. Shannon, 104 South Michigan Avenue, Chicago. He will be assisted by Hobert Cummings, J.F. Delph, Frank Fowler, F.P. Hammond, Robert Hawkins, J.H. Hutton, G.E. Johnson, H.E. Mock, H.K. Nicoll, H.P. Saunders and Paul Vermeren.

Application for Membership

The Chicago Tournament will give an opportunity to old and new Fellows to enjoy a wonderful day of golf, to win a nice prize and to join in the famous good-fellowship of the American Medical Golfing Association.

All male Fellows of the American Medical Association are cordially invited to become Fellows of the American Medical Golfing Association; write Secretary Bill Burns, 2020 Olds Tower, Lansing 8, Mich., for application blank. Participants in the tournament are required to present their home club handicap, signed by the club secretary, or to accept a handicap set by the A.M.G.A. Handicap Committee. No handicap over 30 is allowed. All eighteen hole trophies and prizes are awarded on the basis of scores for the first eighteen holes played. A Fellow absent from the annual banquet following the tournament forfeits his rights to a trophy or prize.

American Medical Golfing Association Officers

Waltman Walters, Hochester, Minn., is President, W.C. Speidel, Seattle, is First Vice President and Director of Handicaps and Jean A. Gruhler, Atlantic City, N.J., is Second Vice President and Director of Arrangements. President Walters anticipates that approximately three hundred Fellows of the A.M.G.A. will play in the enjoyable Chicago tournament on Monday, June 21.

TELEVISION PROGRAM

June 21-25, 1948

A television program has been arranged by Northwestern University Medical School for each day of the Annual Session, as follows:

Monday	Tuesday	Wednesday	Thursday	Friday
9 a.m.				
Roentgen Ray Injuries	Congenital Cardiac Anomalies	Obstetrics and Gynecology	Problems of Lower Genitourinary Tract	Adult Chest and Cardiac Clinic
Michael L. Mason	Stanley Gibson William Potts	Arthur Curtis George Gardner John Brewer James Fitzgerald Chester Doherty	Vincent O'Conor Leander Ribe Knowlton Barber	Dan Sutton Chauncey Usher
10 a.m.				
			Parenteral Fluids Walter Haddock Smith Freeman	
11 a.m.				
Orthopedic Clinic			Anesthesia Demonstration	Endocrinology Clinic
James K. Stack			Mary Karp Mary Frances Poe	M.D. Allocias
1 p.m.				
Early Skin Grafting in Burns	Tendon Suture	Peptic Ulcer	Peripheral Nerve Injuries	Hypertension and Sympathectomy
Harvey Allen	Sumner L. Koch	Clifford Barborka Karl Meyer	Loyal Davis Lewis Pollock	Howard Lindberg John Martin
3				
Examination of the Back	Suction Limb Prostheses	Physical Therapy Demonstrations	Medical Neurology	Dermatologic Demonstrations
Philip Lewin	Clinton Compere	Stafford S. Osborne	Benjamin Boches Alex Arieff	E. A. Oliver and associates

PRELIMINARY PROGRAM OF THE SCIENTIFIC ASSEMBLY

GENERAL SCIENTIFIC MEETINGS

Auditorium, Navy Pier (Room 6)

MONDAY, JUNE 21, 2:00 P. M.

Charles H. Phifer, Member,
Council on Scientific Assembly, Presiding

Practical Clinical Applications of Current Pharmacology.
Chauncey D. Leake, Galveston, Texas.

Principles of Endocrine Therapy.
Allan T. Kenyon, Chicago.

Cytologic Method in the Early Diagnosis of Cancer.
Maurice Fremont-Smith, Boston.

TUESDAY, JUNE 22, 9:00 A. M.

L. W. Larson, Member,
Council on Scientific Assembly, Presiding

Present Status of Narcotic Addiction, with Particular Reference to Medical Indications and Comparative Addiction Liability of the Newer and Older Narcotic Drugs.
Victor H. Vogel, Lexington, Ky.

Ordeals of Public Health.
Hernan Romero, Santiago, Chile.

11:00 A. M.

Stanley P. Reimann, Member,
Council on Scientific Assembly, Presiding

Physician's Obligation When Death Has Resulted From Violent or Obscure Causes.
Alan R. Moritz, Boston.

Blood Transfusion in Medical and Surgical Practice.
Everett Evans, Richmond, Va.

Clinical Uses of Blood Derivatives.
Charles A. Janeway, Boston.

TUESDAY, JUNE 22, 2:00 P. M.

Henry R. Viets, Chairman

Atomic Energy and Medicine.
Lewis L. Strauss, Washington, D. C.

Isotopes for Medicine.
Paul C. Aebersold, Oak Ridge, Tenn.

Isotopes and Internal Radiation.
Joseph G. Hamilton, Berkeley, Calif.

Medical Aspects of the Atomic Bomb.
Stafford L. Warren, Los Angeles.

Medical Program of the Atomic Energy Commission.
Shields Warren, Boston.

THE INAUGURATION MEETING

Ballroom, Hotel Stevens

TUESDAY, JUNE 22, 8 p.m.

Music.

Call to Order by the President, Edward L. Bortz.

Invocation.

Music.

Announcements.

Warren H. Farey, Chairman,
Local Committee on Arrangements.

Music.

Introduction and Installation of President-Elect.
R. L. Sensenich.

Address.
R. L. Sensenich, President.

Music.

Presentation of Medal to Retiring President,
Edward L. Bortz.
Elmer L. Henderson, Chairman, Board of Trustees.

Presentation of Distinguished Service Medal.
R. L. Sensenich, President.

Music.

THE PROGRAMS OF THE SECTIONS

Outline of the Scientific Proceedings—The Preliminary Program and the Official Program

The following papers are announced to be read before the various sections. The order here is not necessarily the order that will be followed in the Official Program, nor is the list complete. The Official Program will be similar to the programs issued in previous years and will contain the final program of each section with abstracts of the papers, as well as lists of committees, program of the General Meeting, list of entertainments and other information. To prevent misunderstandings and protect the interest of advertisers, it is here announced that this Official Program will contain no advertisements. It is copyrighted by the American Medical Association and will not be distributed before the session. A copy will be given to each Fellow on registration.

SECTION ON INTERNAL MEDICINE

MEETS IN AUDITORIUM, NAVY PIER (ROOM 6)

OFFICERS OF SECTION

Chairman—Cecil J. Watson, Minneapolis.

Vice Chairman—James A. Greene, Houston, Texas.

Secretary—Walter L. Palmer, Chicago.

Executive Committee—William D. Stroud, Philadelphia; Joseph T. Wearn, Cleveland; Cecil J. Watson, Minneapolis.

Wednesday, June 23—2 p. m.

The Therapy of Migraine, (Lantern Demonstration).
Robert Marcussen and Harold G. Wolff, New York.

What is Psychotherapy?
Henry M. Thomas Jr., Baltimore.

The Treatment of Pernicious Anemia (Lantern Demonstration).
Russell L. Haden and Donald W. Bortz, Cleveland.

Selection of Therapy for Individual Patients with Thyrotoxicosis.
Robert H. Williams, Boston.

The Frank Billings Lecture: Protein Comes Into Its Own.
James S. McLester, Birmingham, Ala.

The Furtherance of Diabetes Therapy (Lantern Demonstration).
Elliott P. Joslin, Boston.

Thursday, June 24—2 p.m.

Election of Officers

Prognosis of Acute Myocardial Infarction (Lantern Demonstration).
F. Tremaine Billings Jr., Bernard M. Kalstone, James L. Spencer and George R. Meneely, Nashville, Tenn.

The Mechanism and Treatment of Renal Dysfunction in Chronic Congestive Heart Failure (Lantern Demonstration).
Louis Leiter, Reuben Mokotoff, Raymond Weston, Doris J. W. Escher, Leon Hellman and Martin Cherkasky, New York.

Chairman's Address (Lantern Demonstration).
Cecil J. Watson, Minneapolis.

Sarcoidosis (Lantern Demonstration).
Edward S. Ray, Richmond, Va.

The Value of Cytologic Study of Sputum and Bronchial Secretions in the Diagnosis of Carcinoma of the Lung (Lantern Demonstration).
John R. McDonald and Lewis B. Woolner, Rochester, Minn.

Discontinuous Therapy with Penicillin (Lantern Demonstration).
Ralph Tompsett, Alphonse Timpanelli and Walsh McDermott, New York.

Friday, June 25—9 a.m.

JOINT MEETING WITH SECTION ON EXPERIMENTAL MEDICINE AND THERAPEUTICS IN ROOM 4, NAVY PIER

Report of Committee for the Evaluation of the Use of Anticoagulants in the Treatment of Coronary Thrombosis with Myocardial Infarction (Lantern Demonstration).
Irving S. Wright, Chairman, and Charles D. Marple, Executive Secretary of Committee, New York.

Pathogenesis of Arterial Hypertension.
Irvine H. Page, Cleveland.

Psychologic Aspects of Arterial Hypertension.
George Saslow, St. Louis.

Laboratory Studies in Man of Drugs Recently Introduced for the Relief of Essential Hypertension (Lantern Demonstration).
Robert W. Wilkins, Boston.

The Effect of Low Salt Diets on Arterial Hypertension: A Comparison of the Effects of Low Salt and Rice Diets in the Treatment of Arterial Hypertension (Lantern Demonstration).
Henry A. Schroeder, St. Louis.

Review of Fifteen Years' Experience with Sympathectomy in the Treatment of Hypertension at Massachusetts General Hospital.
Kenneth A. Evelyn, London, Ontario, Canada.

SECTION ON SURGERY, GENERAL AND ABDOMINAL

MEETS IN BALLROOM, SHERATON HOTEL

OFFICERS OF SECTION

Chairman—B. Noland Carter, Cincinnati.

Vice Chairman—Warren H. Cole, Chicago.

Secretary—Michael E. DeBakey, New Orleans

Executive Committee—Daniel C. Elkin, Atlanta, Ga.; Alton Ochsner, New Orleans; B. Noland Carter, Cincinnati.

Wednesday, June 23—9 a. m.

Factors Contributing to Low Mortality in Appendectomy for Acute Appendicitis: A Ten Year Study (Lantern Demonstration).
Arthur B. McGraw, Detroit.
Discussion to be opened by Frederick F. Boyce, New Orleans, and Max M. Zinninger, Cincinnati.

The Treatment of Acute Septic Peritonitis (Lantern Demonstration.)
William A. Altemeier, Cincinnati.
Discussion to be opened by Champ Lyons, New Orleans; John S. Lockwood, New York, and Edwin J. Pulaski, San Antonio, Texas.

Acute Obstruction of the Small Bowel (Lantern Demonstration)
Robert W. Buxton and Frederick A. Coller, Ann Arbor, Mich.
Discussion to be opened by Owen H. Wangensteen, Minneapolis, and Charles G. Johnston, Detroit.

Acute Obstruction of the Colon (Lantern Demonstration).
Marshall L. Michel, New Orleans.
Discussion to be opened by Clarence Dennis, Minneapolis, and George V. Brindley, Temple, Texas.

The Rationale and Value of Combined (One Stage) Splenectomy and Portocaval Shunts in Portal Hypertension: Observations on Venous Shunts in the Postsplenectomy Patient with Recurring Hemorrhage.
Louis M. Rousselot, New York.
Discussion to be opened by Robert M. Zollinger, Columbus, Ohio, and Robert R. Linton, Brookline, Mass.

Empyema (Lantern Demonstration).
Brian B. Blades, Washington, D. C.
Discussion to be opened by Edward W. Kent, Pittsburgh, and Thomas H. Burford, St. Louis.

Thursday, June 24—9 a. m.

Election of Officers

Chairman's Address: The Present Status of Surgery of the Heart and Associated Great Vessels (Lantern Demonstration).
B. Noland Carter, Cincinnati.

The Incidence of Malignant Tumors of the Thyroid (Lantern Demonstration).
George Crile Jr., Cleveland.
Discussion to be opened by Charles W. Mayo, Rochester, Minn., and Warren H. Cole, Chicago.

Hyperthyroidism (Lantern Demonstration).
I. S. Ravdin and Edward Rose, Philadelphia.
Discussion to be opened by Harold L. Foss, Danville, Pa., and Warren H. Cole, Chicago.

Hypertension: Evaluation of Treatment (Lantern Demonstration).
Winchell McK. Craig, Rochester, Minn.
Discussion to be opened by Geza de Takats, Chicago, and James L. Poppen, Boston.

Acute Arterial Injuries (Lantern Demonstration).
Norman E. Freeman, San Francisco.
Discussion to be opened by Frederick W. Cooper, Emory University, Ga.; Harris B. Shumacker Jr., Baltimore, and Geza de Takats, Chicago.

Surgical Treatment for Coarctation of the Aorta (Lantern Demonstration).
Robert E. Gross, Boston.
Discussion to be opened by Willis J. Potts, and Richard B. Capps, Chicago.

V 1
194

Friday, June 25—9 a. m.

JOINT MEETING WITH SECTION ON GASTRO-ENTEROLOGY AND PROCTOLOGY

Newer Aspects of the Treatment of Ulcer (Lantern Demonstration).
A. H. Aaron, Buffalo.

Vagotomy (Lantern Demonstration).
Keith S. Grimson, R. W. Rundles, George J. Baylin and H. M. Taylor, Durham, N. C.
Discussion on papers of Dr. Aaron and Drs. Grimson, Rundles, Baylin and Taylor to be opened by Lester R. Dragstedt, Chicago; Francis D. Moore, Boston; A. C. Ivy, Chicago; Waltman Walters, Rochester, Minn., and Walter L. Palmer, Chicago.

Nonspecific Inflammatory Lesions of the Terminal Ileum and Colon.
Russell S. Boles, Philadelphia.

Nonspecific Inflammatory Lesions of the Small and Large Bowel (Lantern Demonstration).
Leland S. McKittrick, Boston.
Discussion on papers of Drs. Boles and McKittrick to be opened by Clarence Dennis, Minneapolis; Burrill B. Crohn, New York; Lester R. Dragstedt, Chicago, and Everett D. Kiefer, Boston.

Diagnosis of Carcinoma of the Colon and Rectum (Lantern Demonstration).
Neil W. Swinton, Hugh F. Hare and William A. Meissner, Boston.
Discussion to be opened by Harry M. Weber, Rochester, Minn., and William H. Daniel, Los Angeles.

SECTION ON OBSTETRICS AND GYNECOLOGY

MEETS IN BALLROOM, SHERATON HOTEL

OFFICERS OF SECTION

Chairman—William F. Mengert, Dallas, Texas

Vice Chairman—Robert L. Faulkner, Cleveland.

Secretary—Arthur B. Hunt, Rochester, Minn.

Executive Committee—Philip F. Williams, Philadelphia; Alice F. Maxwell, San Francisco; William F. Mengert, Dallas, Texas.

Wednesday, June 23—2 p. m.

The Management of Occiput Posterior Position (Lantern Demonstration).
Gerald W. Gustafson, Indianapolis.
Discussion to be opened by Edward L. Cornell, Chicago, and Gerald Rogers, Oklahoma City.

Report of a Ten Year Experiment in the Control of Cancer of the Uterus (Lantern Demonstration).
Catherine MacFarlane, Philadelphia.
Discussion to be opened by B. Z. Cashman, Pittsburgh, and Augusta Webster, Chicago.

Unusual Experiences in the Practice of Obstetrics and Gynecology in China.
Goodrich C. Schauffler, Portland, Ore.
Discussion to be opened by Frank E. Whitacre, Memphis, Tenn.

Panel Discussion on Endometriosis

Joe V. Meigs, Boston, Moderator.

Diagnosis and Medical Management (Lantern Demonstration).
Francis B. Carter, Durham, N. C.

Conservative Surgical Treatment in Young Women (Lantern Demonstration).
Clayton T. Beecham, Philadelphia.

Management of Complications of Endometriosis (Lantern Demonstration).
Clyde L. Randall, Buffalo.

Thursday, June 24—2 p. m.

Election of Officers

Chairman's Address: Estimation of Pelvic Capacity (Lantern Demonstration).
William F. Mengert, Dallas, Texas.

Culdoscopy (Lantern Demonstration).
Albert Decker, New York.
Discussion to be opened by Richard W. TeLinde Baltimore.

Pseudomalignant Changes in the Cervix During Pregnancy (Lantern Demonstration).
Wilson Footer, Oakland, Calif.

Panel Discussion on Obstetric Hemorrhage

Charles A. Gordon, Brooklyn, Moderator.

Antipartum and Intrapartum Obstetric Hemorrhage.
Bernard J. Hanley, Los Angeles.

Postpartum Hemorrhage.
Russell J. Moe, Duluth, Minn.

Precautions to be taken on Blood Transfusion.
Joseph M. Hill, Dallas, Texas.

Precautions in the Use of Plasma in Obstetric Hemorrhage, with Special Reference to the Causation of Hepatitis (Lantern Demonstration).
Frederick W. Hoffbauer, Minneapolis.

Friday, June 25—9 a. m.

JOINT MEETING WITH SECTION ON PEDIATRICS IN AUDITORIUM, NAVY PIER (ROOM 6)

Panel Discussion on Fetal Anoxia at Birth (Cyanosis of the Newborn)

C. Anderson Aldrich, Rochester, Minn., Moderator.

Physiologic Background of Fetal Anoxia at Birth.
Clement A. Smith, Boston.

Prevention of Fetal Anoxia at Birth (Lantern Demonstration).
Nicholson J. Eastman, Baltimore.

Differential Diagnosis and Management of Fetal Anoxia at Birth.
Stewart H. Clifford, Boston.

Pathology of Conditions in which Fetal Anoxia at Birth is an Outstanding Feature (Lantern Demonstration).
W. W. Zuelzer, Detroit.

Rh-Negative Offspring of Immunized Mothers (Lantern Demonstration).
Edwin L. Kendig, Richmond, Va.
Discussion to be opened by S. A. Cosgrove, Jersey City, N. J., and J. Buren Sidbury, Wilmington, N. C.

Emergencies Encountered in the Neonatal Period (Lantern Demonstration).
M. Hines Roberts, Atlanta, Ga.
Discussion to be opened by Fred L. Adair, Chestertown, Ind., and Nina A. Anderson, Cincinnati.

Ovarian Tumors in Childhood (Lantern Demonstration).
Harold W. Dargeon, New York.
Discussion to be opened by Goodrich C. Schauffler, Portland, Ore.

SECTION ON OPHTHALMOLOGY

MEETS IN THORNE HALL, NORTHWESTERN UNIVERSITY

OFFICERS OF SECTION

Chairman—Everett L. Goar, Houston, Texas.

Vice Chairman—Francis Heed Adler, Philadelphia.

Secretary—Trygve Gundersen, Boston.

Executive Committee—Frederick C. Cordes, San Francisco; Derrick Vail, Chicago; Everett L. Goar, Houston, Texas.

Wednesday, June 23—9 a. m.

Chairman's Address (Lantern Demonstration).
Everett L. Goar, Houston, Texas.

Address.
John A. MacMillan, Montreal, Canada.

Retrolental Fibroplasia and Persistent Hyperplastic Primary Vitreous: Two Entities (Lantern Demonstration).
Algernon B. Reese, New York.
Theodore H. Ingalls, Southborough, Mass.

Treatment of Glaucoma Associated with Iridocyclitis.
Adolph Posner and Abraham Schlossman, New York.

The Use of Strips of Orbicularis Oculi Muscles in Surgery of the Eyelids (Lantern Demonstration).
William B. Clark, New Orleans.

Thursday, June 24—9 a. m.

Election of Officers

Verified Refraction (Lantern Demonstration).
S. Judd Beach, Portland, Maine.

Intraorbital Tumors.
Arnold W. Forrest, New York.

The Use of "D.F.P." (Diisopropyl Fluorophosphate) in Glaucoma: Evaluation of Results over a Three Year Period (Lantern Demonstration).
P. Robb McDonald and Irving H. Leopold, Philadelphia.

The Blind Spot Syndrome (Lantern Demonstration).
Kenneth C. Swan, Portland, Ore.

Friday, June 25—9 a. m.

Nonmedical Problems in Industrial Ophthalmology.
Ralph S. McLaughlin, Charleston, W. Va.

The Use of Streptomycin and Streptomycin plus "Promizole" in Experimental Ocular Tuberculosis (Lantern Demonstration).
Alan C. Woods, Baltimore.

A Method of Retrobulbar Anesthesia Which Produces an Associated Motor Block of the Extraocular Muscles (Lantern and Motion Picture Demonstration).
Harold Gifford Jr., Omaha.

Basic Principles of Ocular Muscle Surgery.
Watson Gailey, Bloomington, Ill.

A Further Exceedingly Delicate Test for Astigmatic Axis (Lantern Demonstration).
William H. Crisp, Denver, and George H. Stine, Colorado Springs, Colo.

SECTION ON LARYNGOLOGY, OTOLOGY AND RHINOLOGY

MEETS IN THORNE HALL, NORTHWESTERN UNIVERSITY

OFFICERS OF SECTION

Chairman—Fletcher D. Woodward, Charlottesville, Va.

Vice Chairman—John R. Simpson, Pittsburgh.

Secretary—J. Milton Robb, Detroit.

Executive Committee—Louis H. Clerf, Philadelphia; J. Mackenzie Brown, Los Angeles; Fletcher D. Woodward, Charlottesville, Va.

Wednesday, June 23—2 p. m.

Inhalation of Nebulized Aerosols in Office Practice (Lantern Demonstration).
David Davis, Washington, D. C.
Discussion to be opened by Alvan L. Barach, New York, and Maurice S. Segal, Boston.

The Symptomatic Elongated Styloid Process (Lantern Demonstration).
Watt W. Eagle, Durham, N. C.
Discussion to be opened by C. N. Kos, Iowa City, and O. E. Van Alyea, Chicago.

Rehabilitation of the Larynx in Cases of Bilateral Abductor Paralysis: A Report of the Past Four Years' Experience with the Open Approach to Arytenoidectomy for Relief of Bilateral Abductor Paralysis (Lantern Demonstration).
De Graaf Woodman, New York.
Discussion to be opened by Paul H. Holinger, Chicago, and Fletcher D. Woodward, Charlottesville, Va.

Differential Diagnosis of Oral Lesions (Lantern Demonstration).
Russell A. Sage, Indianapolis.
Discussion to be opened by Le Roy A. Schall, Boston, and Charles D. Blassingame, Memphis, Tenn.

Transtympanic Fenestration; the Final Technic. Fenestration and the Hydrodynamic Hypothesis: Its Practical Implications.
O. Popper, Johannesburg, South Africa.
Discussion to be opened by Douglas Carruthers, Sydney, Australia, and A. L. Juers, Chicago.

Thursday, June 24—2 p. m.

Executive Session

Election of Officers

Chairman's Address: A Medical Criticism of Automotive Engineering (Lantern Demonstration).
Fletcher D. Woodward, Charlottesville, Va.

The Management of Acute Laryngotracheobronchitis (Lantern Demonstration).
John R. Simpson, Pittsburgh.
Discussion to be opened by Louis H. Clerf, Philadelphia, and Paul H. Holinger, Chicago.

Laryngectomy: A Surgical Technic Which Promotes Rapid Healing (Lantern and Motion Picture Demonstration).
John B. Erich, Rochester, Minn.
Discussion to be opened by Henry B. Orton, Newark, N. J., and Le Roy A. Schall, Boston.

Lymphoid Eustachian Salpingitis: Selective Criteria for Radiation Therapy (Lantern Demonstration).
J. Brown Farrior, Tampa, Fla.
Discussion to be opened by Gilbert E. Fisher, Birmingham, Ala., and John R. Lindsay, Chicago.

V 13 1948

Blast Injuries to the Ear (Texas City Disaster).
George S. McReynolds, Fred R. Guilford and G. R. Chase, Galveston, Texas.
Discussion to be opened by John S. Knight, Kansas City, Mo., and Paul A. Campbell, Chicago.

Friday, June 25—2 p. m.

Surgery of the Chronic Ear by the Endaural Approach (Motion Picture Demonstration).
Howard P. House, Los Angeles.
Discussion to be opened by John F. Tolan, Seattle, and James E. Crowshore, Detroit.

The Interpretation of Hearing Tests (Lantern Demonstration).
Stacy R. Guild, Baltimore.
Discussion to be opened by A. C. Furstenberg, Ann Arbor, Mich., and L. R. Boies, Minneapolis.

The Sphenopalatine Ganglion: Anatomy, Function and Symptomatology (Lantern Demonstration).
David R. Higbee, San Diego, Calif.
Discussion to be opened by William E. Grove, Milwaukee, and W. Likely Simpson, Memphis, Tenn.

Cancer of the Larynx: Five Year End Results in Series of Five Hundred Cases, with Special Study of Those Developing Recurrence or Metastasis (Lantern Demonstration).
Chevalier L. Jackson, John V. Blady, Charles Norris and Walter Maloney, Philadelphia.
Discussion to be opened by Gordon B. New, Rochester, Minn., and Hayes Martin, New York.

SECTION ON PEDIATRICS

MEETS IN AUDITORIUM, NAVY PIER (ROOM 6)

OFFICERS OF SECTION

Chairman—Oscar Reiss, Los Angeles.

Vice Chairman—Stanley Gibson, Chicago.

Secretary—Margaret Mary Nicholson, Washington, D.C.

Executive Committee—John Aikman, Rochester, N. Y.; Gilbert J. Levy, Memphis, Tenn.; Oscar Reiss, Los Angeles.

Wednesday, June 23—9 a. m.

American Q Fever, (Lantern Demonstration).
R. J. Huebner, W. L. Jellison and M. Dorothy Beck, Hondo, Calif.

Primary Virus Pneumonia in Infants (Lantern Demonstration).
John M. Adams, Minneapolis.
Discussion to be opened by C. B. Conklin, Washington, D. C.

Virus Encephalitis (Lantern Demonstration).
Russell J. Blattner, Houston, Texas.
Discussion to be opened by Herbert A. Wenner, Kansas City, Kan.

Clinical Manifestations of Infection with Poliomyelitis Virus.
Albert E. Casey, Birmingham, Ala., and William I. Fishbein, Francis B. Gordon and Frank M. Schabel Jr., Chicago, under the direction of Herbert N. Hundesen, Chicago.

Enteral Treatment of Diarrhea in Infancy (Lantern Demonstration).
Edward Scott O'Keefe, Lynn, Mass.

Reaction to Whooping Cough Vaccination.
John A. Toomey, Cleveland.

Thursday, June 24—9 a. m.

Election of Officers

Epilepsy in Childhood (Lantern Demonstration).
M. G. Peterman, Milwaukee.

The Reduction and Prevention of Poisoning Accidents in Children (Lantern Demonstration).
John Aikman, Rochester, N. Y

Jet Injection in Pediatric Practice (Lantern Demonstration).
James G. Hughes, Robert G. Jordan and Fontaine S. Hill, Memphis, Tenn.
Discussion to be opened by Robert A. Hingson, Memphis, Tenn.

The Class Room as a Factor in Growth Deviation.
Darell Boyd Harmon, Austin, Texas.

Aplastic Anemia in Children, Report of a Case with Treatment by Splenectomy.
Arthur F. Abt, Chicago.

Streptomycin Therapy in Tuberculous Meningitis (Lantern Demonstration).
Abraham Levinson, Chicago.
Discussion to be opened by William S. Hoffman, Chicago.

Newer Concepts of the Etiology and Management of Idiopathic Ulcerative Colitis (Lantern Demonstration)
Sidney A. Portis, Chicago

Friday, June 25—9 a. m.

JOINT MEETING WITH SECTION ON OBSTETRICS AND GYNECOLOGY

Panel Discussion on Fetal Anoxia at Birth (Cyanosis of the Newborn).
C. Anderson Aldrich, Rochester, Minn., Moderator.

Physiologic Background of Fetal Anoxia at Birth.
Clement A. Smith, Boston.

Prevention of Fetal Anoxia at Birth (Lantern Demonstration).
Nicholson J. Eastman, Baltimore.

Differential Diagnosis and Management of Fetal Anoxia at Birth.
Stewart H. Clifford, Boston.

Pathology of Conditions in Which Fetal Anoxia at Birth is an Outstanding Feature. (Lantern Demonstration).
W. W. Zuelzer, Detroit.

The Negative Offspring of Immunized Mothers (Lantern Demonstration).
Edwin L. Kendig, Richmond, Va.
Discussion to be opened by Herbert F. Traut, San Francisco; S. A. Cosgrove, Jersey City, N.J., and J. Baren Sidbury, Wilmington, N.C.

Emergencies Encountered in the Neonatal Period (Lantern Demonstration).
M. Hines Roberts, Atlanta, Ga.
Discussion to be opened by Fred L. Adair, Chestertown, Ind., and Nina A. Anderson, Cincinnati.

Ovarian Tumors in Childhood (Lantern Demonstration).
Harold W. Dargeon, New York.
Discussion to be opened by Goodrich C. Schauffler, Portland, Ore.

SECTION ON EXPERIMENTAL MEDICINE AND THERAPEUTICS

MEETS IN ROOM 4, NAVY PIER

OFFICERS OF SECTION

Chairman—Walter Bauer, Boston.

Vice Chairman—Dwight L. Wilbur, San Francisco.

Secretary—Carl V. Moore, St. Louis

Executive Committee—E. V. Allen, Rochester, Minn.; Carl A. Dragstedt, Chicago; Walter Bauer, Boston.

Wednesday, June 23—9 a.m.

Fat in Parenteral Nutrition (Lantern Demonstration).
Frederick J. Stare, Boston

Antibody Response in Patients with Hypoproteinemia, with Special Reference to the Effect of Protein Hydrolysate Supplementation (Lantern Demonstration).
Michael G. Wohl, John G. Reinhold, S. Brandt Rose, L. Ashby Adams and Wells F. Harvey, Philadelphia.

Clinical Significance of the Electrolyte Composition of Sweat in Abnormalities of Adrenal Cortical Function (Lantern Demonstration).
Jerome W. Conn, Ann Arbor, Mich.

The Specific Treatment of Brucellosis with a Combination of Streptomycin and a Sulfonamide Compound (Lantern Demonstration).
Wesley W. Spink, Wendell H. Hall, James M. Shaffer and Abraham I. Braude, Minneapolis.

Studies Concerning Oral Penicillin in Patients with Rheumatic Fever (Lantern Demonstration).
Benedict F. Massell, James W. Dow and T. Duckett Jones, Boston.

New Penicillin Products for Sustained Effects (Lantern Demonstration).
Leo Loewe, Albert E. Sobel and Erna Alturr-Werber, Brooklyn.

Thursday, June 24—9 a.m.

Election of Officers

Chairman's Address (Lantern Demonstration).
Walter Bauer, Boston.

The Cure of Recurrent Vivax Malaria with Pentaquine (Lantern Demonstration).
L. T. Coggeshall, Chicago.

Treatment of Hemophilia with Plasma Fraction I (Lantern Demonstration).
Louis K. Diamond, Boston.

Studies on the Circulation with the Use of Radioactive Tracers.
Myron Prinzmetal, Beverly Hills, Calif.

The Influence of "Dibenamine" on the Function of the Sympathetic Nervous System in Man.
Hans H. Hecht and Ferne S. Focht, Salt Lake City.

Friday, June 25—9 a.m.

JOINT MEETING WITH SECTION ON INTERNAL MEDICINE

Report of Committee for the Evaluation of the Use of Anticoagulants in the Treatment of Coronary Thrombosis with Myocardial Infarction (Lantern Demonstration).
Irving S. Wright, Chairman, and Charles D. Marple, Executive Secretary of Committee, New York.

Pathogenesis of Arterial Hypertension.
Irvine H. Page, Cleveland.

Psychologic Aspects of Arterial Hypertension.
George Saslow, St. Louis.

Laboratory Studies in Man of Drugs Recently Introduced for the Relief of Essential Hypertension (Lantern Demonstration).
Robert W. Wilkins, Boston.

The Effect of Low Salt Diets on Arterial Hypertension: A Comparison of the Effects of Low Salt and Rice Diets in the Treatment of Arterial Hypertension (Lantern Demonstration).
Henry A. Schroeder, St. Louis.

Review of Fifteen Years' Experience with Sympathectomy in the Treatment of Hypertension at Massachusetts General Hospital.
Kenneth A. Evelyn, London, Ontario, Canada.

SECTION ON PATHOLOGY AND PHYSIOLOGY

MEETS IN ROOM 4, NAVY PIER

OFFICERS OF SECTION

Chairman—Alvin G. Foord, Pasadena, Calif.

Vice Chairman—George E. Wakerlin, Chicago.

Secretary—Edwin F. Hirsch, Chicago

Executive Committee—Virgil H. Moon, Philadelphia; J. J. Moore, Chicago; Alvin G. Foord, Pasadena, Calif.

Wednesday, June 23—2 p.m.

Hypertension (Lantern Demonstration).
George E. Wakerlin, Chicago

Discussion to be opened by Louis N. Katz, Chicago, and Caroline C. B. Thomas, Baltimore.

Bright's Disease (Lantern Demonstration).
E. T. Bell, Minneapolis.

Recent Advances in Nutrition.
Ancel Keys, Minneapolis.

Discussion to be opened by J. B. Youmans, Chicago, and Tom D. Spies, Birmingham, Ala

Clinical Problems in Fluid Balance (Lantern Demonstration).
Edward Muntwyler, Brooklyn.

Discussion to be opened by W. S. Hoffman and D. A. MacFadyen, Chicago.

Thursday, June 24—2 p.m.

Election of Officers

Disorders of the Liver (Lantern Demonstration)
H. T. Karsner, Cleveland

Discussion to be opened by H. P. Popper and Richard B. Capps, Chicago.

Cancer Problems in Practice (Lantern Demonstration).
Stanley P. Reimann, Philadelphia.

Discussion to be opened by J. J. Moore and J. P. Simonds, Chicago.

Recent Advances in Gastrointestinal Physiology (Lantern Demonstration).
J. E. Thomas, Philadelphia.

Discussion to be opened by A. C. Ivy and Heinrich Necheles, Chicago.

V 1
194

New Developments in Endocrinology (Lantern Demonstration).
Warren O. Nelson, Iowa City.
Discussion to be opened by A. J. Carlson and S. Soskin, Chicago.

Friday, June 25--2 p.m.

Chairman's Address: Embolism in Coronary Heart Disease (Lantern Demonstration).
Alvin G. Foord, Pasadena, Calif.

Hippocrates and the Beanstalk (Lantern Demonstration).
Philip R. White, Philadelphia.

The Pathogenesis of Toxoplasmosis (Lantern Demonstration).
J. K. Frenkel, San Francisco

Cholesterol Metabolism and Its Relation to Atherosclerosis, Coronary Artery Disease, and Arteriosclerosis (Lantern Demonstration).
Chaney and William Gonzales, Los Angeles.

The Mechanism of Streptomycin Action in Tuberculosis (Lantern Demonstration).
Harry J. Corper and Maurice L. Cohn, Denver.

SECTION ON NERVOUS AND MENTAL DISEASES

MEETS IN ROOM 3, NAVY PIER

OFFICERS OF SECTION

Chairman--A. R. Vonderahe, Cincinnati.

Vice Chairman--William A. Smith, Atlanta, Ga.

Secretary--Frederick P. Moersch, Rochester, Minn.

Executive Committee--Percival Bailey, Chicago; Roland P. Mackay, Chicago; A. R. Vonderahe, Cincinnati.

Wednesday, June 23--9 a.m.

Present Day Status of Medical Psychologic Aspects of Alcoholism.
Robert V. Seliger, Baltimore.

Psychiatric Problems in a Thyroid Clinic.
John C. Whitehorn and Theodore Lidz, Baltimore.

Analysis of Treatment in a Psychosomatic Clinic (Lantern Demonstration).
H. S. Ripley and Stewart G. Wolf, New York.

Psychosomatic Studies in Narcolepsy (Lantern Demonstration).
H. C. Modlin, Topeka, Kan., and H. H. Jasper and W. D. Ross, Montreal, Canada.

Psychiatry in Clinical Medicine.
Howard P. Rome, Rochester, Minn.

Congenital Universal Indifference to Pain (Lantern and Motion Picture Demonstration).
David A. Boyd Jr. and Louis W. Nie, Indianapolis.

Experience with Electronarcosis (Lantern Demonstration).
Douglas Goldman, Cincinnati.

Thursday, June 24--9 a.m.

Business Meeting

Election of Officers

Chairman's Address: Neuroanatomy and Its Relationship to the Medical Sciences.
A. R. Vonderahe, Cincinnati.

Cerebellar Seizures Experimentally Elicited (Lantern Demonstration).
Sam L. Clark, Nashville, Tenn.

Angiography in the Diagnosis and Treatment of Cerebral Hemorrhage (Lantern Demonstration).
I. S. Wechsler and Sidney W. Gross, New York.

The Specific Therapy of Bacterial Infections of the Central Nervous System (Lantern Demonstration).
Harry F. Dowling, Washington, D. C.

Cerebral Changes in Diabetes Mellitus (Lantern Demonstration).
Russell N. DeJong, Ann Arbor, Mich.

The Symptomatic Treatment of Certain Types of Headaches (Lantern Demonstration).
Arnold P. Friedman, Charles Brenner and Sidney Carter, New York.

Friday, June 25--9 a.m.

Congenital Dermal Sinuses as a Cause of Meningitis, Intraspinal Abscess and Intracranial Abscess (Lantern Demonstration).
Lester A. Mount, New York

Interruption of the Sympathetic Nerve Supply to the Brain: Effect on Parkinson's Syndrome.
W. James Gardner and Guy H. Williams, Cleveland.

Frontal Lobotomy for Intractable Pain.
John B. Dynes and James L. Poppen, Boston.

Sciatica After Three to Eight Years (Lantern Demonstration).
Dean H. Echols, New Orleans.

Studies of Intracranial Tumors Employing Radioactive Isotopes: I. Concentration of P^{32} by Cerebral Tumors (Lantern Demonstration).
Bertram Selverstone and A. K. Solomon, Boston.

Scoliosis as a Manifestation of Disease of the Spinal Cord (Lantern Demonstration).
Edwin B. Boldry, John E. Adams and Howard A. Brown, San Francisco.

SECTION ON DERMATOLOGY AND SYPHILOLOGY

MEETS IN ROOM 1, NAVY PIER

OFFICERS OF SECTION

Chairman--Henry E. Michelson, Minneapolis.

Vice Chairman--Carroll S. Wright, Philadelphia

Secretary--Clinton W. Lane, St. Louis

Executive Committee--Clyde L. Cummer, Cleveland; Nelson Paul Anderson, Los Angeles; Henry E. Michelson, Minneapolis

Wednesday, June 23--9 a.m.

Chairman's Address: Criteria for the Diagnosis of Certain Tuberculoderms (Lantern Demonstration).
Henry E. Michelson, Minneapolis.

The Clinical Value of the Kveim Test in Sarcoidosis.
Carl T. Nelson, New York.

A Histologic Comparison of Micropapular Tuberculid and Rosacea (Lantern Demonstration).
Carl W. Laymon and Eugene P. Schoch Jr., Minneapolis.

Textile Dermatitis in Males.
G.A. Grant Peterkin, Edinburgh, Scotland.

Contact Dermatitis of the Hands: Localization as a Means of Causative Diagnosis (Lantern Demonstration).
George L. Waldbott, Detroit.

Dermatitis of the Hands Due to Ingested Allergens.
Bernard H. Winston, Kansas City, Mo.

Some Practical Aspects of Gross Sensitization in Allergic Eczematous Dermatitis (Lantern Demonstration).
Rudolf L. Baer, New York.

Thursday, June 24--9 a.m.

Election of Officers

Present Status of Dermatologic Training.
Francis E. Senear, Chicago, and George M. Lewis and Frank E. Cornia, New York.

The Distinguished Lecture in Dermatology: Cutaneous Manifestations of Some Tropical Diseases (Lantern Demonstration).
Howard Fox, New York.

The Culture and Identification of Fungi as an Office Procedure (Lantern Demonstration).
J. Walter Wilson, Los Angeles.

Manual Epilation in the Treatment of Tinea Capitis (Lantern Demonstration).
John F. Wilson, Philadelphia.

Prevention of Syphilis: Treatment of Contacts During the Incubation Stage with Penicillin in Oil and Beeswax; Bismuth Ethyl Camphorate and Oxophenarsine Hydrochloride (Lantern Demonstration).
Lee J. Alexander and Arthur G. Schoch, Dallas, Texas.

Essential Hirsutism, Dermatologic and Endocrine Considerations (Lantern Demonstration).
J. Lamar Calloway and E.C. Hamblen, Durham, N.C.

The Genetics of Xanthoma Tuberosum Multiplex (Lantern Demonstration).
Maurice T. Fliegelman, Charles F. Wilkinson Jr. and Eugene A. Hand, Ann Arbor, Mich.

Ehlers-Danlos Syndrome (Lantern Demonstration).
Sture A. Johnson, Madison, Wis., and Harold F. Falls, Ann Arbor, Mich.

Friday, June 25--9 a.m.

Pruritus Ani et Vulvae: Further Observations and Studies in Series of Five Hundred Patients (Lantern Demonstration).
W. Howard Hailey, Atlanta, Ga.

Management of the Emotional Factors in Localized Neurodermatitis.
W.R. Huebler, Youngstown, Ohio.

The Psychologic and Emotional Factors in Skin Diseases.
A.H. Gottesman and Karl A. Menninger, Topeka, Kan.

Rickettsialpox: A Systemic Disease with Dermatologic Manifestations (Lantern Demonstration).
John F. Daly, New York.

Porphyric Bullous Dermatosis (Lantern Demonstration).
Israel Zeligman, Baltimore.

Comparison of Bacitracin with Other Remedies for Local Pyogenic Infections (Lantern Demonstration).
J. Lowry Miller, New York.

The Treatment of Herpes Zoster Ophthalmicus with Convalescent Blood Serum (Lantern Demonstration).
Frederick T. Becker, Duluth, Minn.

SECTION ON PREVENTIVE AND INDUSTRIAL MEDICINE AND PUBLIC HEALTH

OFFICERS OF SECTION

Chairman—Robert H. Riley, Baltimore.

Vice Chairman—Oscar A. Sander, Milwaukee.

Secretary—Rutherford T. Johnstone, Los Angeles.

Executive Committee—E.L. Stebbins, Baltimore; Clarence O. Sappington, Chicago; Robert H. Riley, Baltimore.

Wednesday, June 23—2 p.m.

JOINT MEETING WITH SECTION ON GENERAL PRACTICE OF MEDICINE IN ROOM 2, NAVY PIER

Diagnosis and Treatment of Occupational Metal Poisoning.
Leonard Greenburg, New York.

Lead:

The Differential Diagnosis of Lead Poisoning: Accepted Laboratory Criteria (Lantern Demonstration).
Elston L. Belknap, Milwaukee.

The Treatment of Lead Poisoning. (Should One Attempt to "Store Lead" or to "Delead"?) (Lantern Demonstration).
William C. Wilentz, Perth Amboy, N.J.

The Industrial Solvents:
Their Physiologic Effect (Lantern Demonstration).
John H. Foulger, Wilmington, Del.
Diagnosis and Treatment.
Rex H. Wilson, Akron, Ohio.

The Pneumoconioses: Which Industrial Dusts Are Inert? Which are Harmful? Why (Lantern Demonstration)?
L. E. Hamlin, Chicago.

Common Occupational Skin Diseases (Lantern Demonstration).
Nelson Paul Anderson, Los Angeles.

PANEL DISCUSSION AND QUESTION AND ANSWER PERIOD, AUDIENCE PARTICIPATION, WITH R. T. JOHNSTONE, LOS ANGELES, AS MODERATOR AND THE CONTRIBUTORS TO THE JOINT PROGRAM AND DR. OSCAR A. SANDER, MILWAUKEE, AS SPEAKERS.

Thursday, June 24--2 p.m.

MEETS IN ROOM 5, NAVY PIER

Election of Officers

Chairman's Address.
Robert H. Riley, Baltimore

Discussion of a Proposal for a Specialty Board.
E L. Stebbins, Baltimore.

Clinical Recovery in Advanced Pulmonary Tuberculosis Induced by Total Lung Rest in the Immobilizing Lung Chamber (Lantern Demonstration).
Alvan L. Barach, C. F. Herben, J. H. Cullen and A. Chesmore Eastlake Jr., New York.

Discussion to be opened by G. L. Bellis, Winnebago, Wis.

Official Medical Investigation of Death in the Interest of Public Safety (Lantern Demonstration).
Alan R. Moritz, Boston.

The Virginia Medical Examiner System: The Coroner vs. the State Medical Examiner.
Herbert S. Breyfogle, Richmond, Va.

A Public Health Approach to the Problem of Home Accidents During the Preschool Period.
Edward R. Schlesinger, Albany, N.Y.

Friday, June 25--9 a.m.

JOINT MEETING WITH SECTION ON RADIOLOGY IN BOULEVARD ROOM, SHERATON HOTEL

SYMPOSIUM ON THE NEWER ASPECTS OF CERTAIN OCCUPATIONAL DUST DISEASES

Beryllium

Chemical and Clinical Aspects (Lantern Demonstration).
Willard F. Machle, New York.

Pathologic Aspects (Lantern Demonstration).
Arthur J. Vorwald, Saranac, N. Y.

Radiologic Aspects
Stanley A. Wilson, Salem, Mass.

Diatomite Pneumoconiosis (Diatomaceous Earth)

Clinical Aspects.
Walter M. Anderson, Lompoc, Calif.

Pathologic Aspects.
William H. Carnes, Baltimore.

Radiologic Aspects (Lantern Demonstration).
Reginald H. Smart, Los Angeles.

Bauxite (Shaver's Disease)

Chemical and Physical Factors.
C. M. Jephcott, Niagara, Canada

Pathologic Aspects.
A. R. Riddell, Toronto, Canada.

Clinical and Radiologic Aspects (Lantern Demonstration).
C. G. Shaver, Niagara, Canada.

PANEL DISCUSSION, QUESTION AND ANSWER PERIOD, WITH AUDIENCE PARTICIPATION, WITH ARTHUR J. VORWALD, SARANAC, N. Y., AS MODERATOR AND THE CONTRIBUTORS TO THE JOINT PROGRAM AS SPEAKERS.

SECTION ON UROLOGY

MEETS IN ROOM 1, NAVY PIER

OFFICERS OF SECTION

Chairman—Reed M. Nesbit, Ann Arbor, Mich.

Vice Chairman—Earl E. Ewert, Boston.

Secretary—Edward N. Cook, Rochester, Minn.

Executive Committee—Arbor D. Munger, Lincoln, Neb; Grayson Carroll, St. Louis; Reed M. Nesbit, Ann Arbor, Mich.

Wednesday, June 23—2 p.m.

Effect of Nephrectomy on Hypertension in Unilateral Renal Disease.
Eugene B. Vickery, New Orleans.

Lower Nephron Nephrosis (Lantern Demonstration).
Rex E. Van Duzen, Dallas, Texas.
Discussion to be opened by Clarence V. Hodges, Baltimore, and Harry Culver, Chicago.

The Treatment of Hypospadias (Lantern Demonstration).
Fred Z. Havens, Rochester, Minn., and Albert S. Black, Omaha.
Discussion to be opened by C.D. Creevy, Minneapolis, and David M. Davis, Philadelphia.

The End Results of Endovesical Treatment of Tumors of the Bladder.
John E. Dees, Durham, N.C.

The Preoperative and Postoperative Management of Patients Undergoing Ureteral Intestinal Anastomosis (Lantern Demonstration).
Rubin H. Flocks, Iowa City.

Urologic Complications Following Abdominal Perineal Resection.
Edward W. Campbell and G. J. Gislason, Philadelphia.

Vesical Calculus, with Report of a Gigantic Stone in the Female Bladder (Lantern Demonstration).
William N. Wishard Jr. and Myron Nourse, Indianapolis.
Discussion on papers of Drs. Campbell and Gislason and Drs. Wishard and Nourse to be opened by George H. Ewell, Madison, Wis., and Temple Ainsworth, Jackson, Miss.

Thursday, June 24—2 p.m.

Election of Officers

Chairman's Address (Lantern Demonstration).
Reed M. Nesbit, Ann Arbor, Mich.

Carcinoma Cells in Prostatic Secretion (Lantern Demonstration).
Donald D. Albers, John R. McDonald and Gershon J. Thompson, Rochester, Minn.
Discussion to be opened by Russell D. Herrold, Chicago.

Modified Technic in Suprapubic Prostatectomy (Lantern Demonstration).
O.A. Nelson, Seattle.

Retropubic Prostatectomy (Lantern and Motion Picture Demonstration).
Francis P. Twinem and Francis A. Beneventi, New York.

Status of Perineal Prostatectomy Today. (Lantern Demonstration).
Daniel R. Higbee, Denver.

An Evaluation of Transurethral Resection for Prostatic Hypertrophy (Lantern Demonstration).
John A. Taylor and Charles H. Place, New York.
Discussion to be opened by Henry Mortenson, Melbourne, Australia; Grayson Carroll, St. Louis; Vincent J. O'Conor, Chicago, and Nels F. Ockerblad, Kansas City, Mo.

Friday, June 25—2 p.m.

Muscle Transplant for Neurogenic Incontinence.
Earl E. Ewert, Boston.

Repair of Vesicovaginal Fistula. (Lantern Demonstration).
Roger W. Barnes and Ivan E. Martin, Los Angeles.

Vesicointestinal Fistulas (Lantern Demonstration).
John K. Ormond, John W. Best and Milton E. Klinger, Detroit.
Discussion on papers of Dr. Ewert, Drs. Barnes and Martin and Drs. Ormond, Best and Klinger to be opened by Hart M. Stang, Eau Claire, Wis.

Studies in Polycystic Renal Disease (Lantern Demonstration).
A. F. Goldstein, Baltimore.

Massive Retroperitoneal Tumors (Lantern Demonstration).
Robert W. Hunt, New York.

SECTION ON ORTHOPEDIC SURGERY

MEETS IN ROOM 3, NAVY PIER

OFFICERS OF SECTION

Chairman—J. Warren White, Greenville, S. C.

Vice Chairman—David M. Bosworth, New York.

Secretary—Joseph S. Barr, Boston.

Executive Committee—Theodore A. Willis, Cleveland; Francis M. McKeever, Los Angeles; J. Warren White, Greenville, S. C.

Wednesday, June 23—2 p. m.

Symposium on Foot Disabilities

F. D. Dickson, Kansas City, Mo., Chairman

Congenital Foot Variations: Their Influence in Clinical Disorders.
Dudley J. Morton, New York.
Discussion to be opened by R. I. Harris, Toronto, Canada.

Treatment of Congenital Deformities of the Feet in Infancy (Lantern Demonstration).
J. H. Kite, Atlanta, Ga.
Discussion to be opened by John L. McDonald, Toronto, Canada.

Treatment of Functional Disorders of the Foot in Childhood (Lantern Demonstration).
William T. Green, Boston.
Discussion to be opened by J. E. M. Thomson, Lincoln, Neb.

Conservative Treatment of Functional Disorders of the Foot in the Adolescent and Adult.
R. Plato Schwartz, Rochester, N. Y.
Discussion to be opened by Philip Lewin, Chicago.

Operative Treatment of Foot Imbalance in the Adolescent (Lantern Demonstration).
Halford Hallock, New York.
Discussion to be opened by J. Warren White, Greenville, S. C.

Operative Treatment of Deformities of the Feet in Adults (Lantern Demonstration).
Charles W. Peabody, Detroit.
Discussion to be opened by Earl D. McBride, Oklahoma City.

Thursday, June 24—2 p. m.

Election of Officers

Acromioclavicular Dislocation (Lantern Demonstration).
Boardman M. Bosworth, Bronxville, N. Y.

Arthroplasty of the Hip: Study of End Result (Lantern Demonstration).
Frank E. Stinchfield, New York.

Chairman's Address (Lantern Demonstration).
J. Warren White, Greenville, S. C.

Effect of Diathermy (Short Wave and Microwave) on Bone Growth in the Albino Rat (Lantern Demonstration).
Charles S. Wise, Washington, D. C., and Benjamin Castleman and Arthur L. Watkins, Boston.

Some Pathologic and Clinical Aspects of Low Back Pain.
Sten Friberg, Stockholm, Sweden.

Friday, June 25—2 p. m.

Intracapsular Fracture of the Neck of the Femur in Children (Lantern Demonstration).
Russell F. Sullivan, Brookline, Mass.

Comminuted Fractures of the Os Calcis: Choice of Treatment (Lantern Demonstration).
E. O. Geckeler, Philadelphia.

Architectural Principles in Arthrodesis.
H. A. Brittain, Norwich, England.

Radiocarpal Arthrodesis of the Wrist Using Iliac Bone Grafts (Lantern Demonstration).
I. S. McReynolds, Houston, Texas.

The Use of Capsulectomy and Arthroplasty for Limitation of Finger Motion (Lantern Demonstration).
Frederick L. Liebolt, New York.
Discussion to be opened by James P. Cole, Buffalo, and William G. Rhorer, Long Beach, Calif.

Study of End Result in Two Hundred Cases of Triple Arthrodesis of the Foot (Lantern Demonstration).
Edward J. Ferrarone and Garry deN. Hough Jr., Springfield, Mass.

SECTION ON GASTRO-ENTEROLOGY AND PROCTOLOGY

MEETS IN ROOM 5, NAVY PIER

OFFICERS OF SECTION

Chairman—Sara M. Jordan, Boston.

Vice Chairman—William H. Daniel, Los Angeles.

Secretary—Grant H. Laing, Chicago.

Executive Committee—J. A. Bargen, Rochester, Minn.; Martin S. Kleckner, Allentown, Pa.; Sara M. Jordan, Boston.

Wednesday, June 23—9 a.m.

Aren't We Still Missing Many Cases of Hiatus Hernia?
G. Gill Richards and Kenneth A. Crockett, Salt Lake City.

Incidence of Hiatus Hernia and Associated Lesions Diagnosed by Roentgen Ray.
Irving B. Brick, Washington, D.C.

Differential Diagnosis of Diaphragmatic Hernia and Coronary Artery Disease (Lantern Demonstration).
Arthur M. Master, Simon Dack, Arthur Grishman and Jacob M. Stone, New York.
Discussion on papers of Drs. Richards and Crockett; Dr. Brick, and Drs. Master, Dack, Grishman and Stone to be opened by Edward L. Jenkinson and Ralph C. Brown, Chicago.

Heartburn (Lantern Demonstration).
Henry J. Tumen and Edwin M. Cohn, Philadelphia.
Discussion to be opened by David J. Sandweiss, Detroit.

Studies on the Mechanism of Postgastrectomy Syndrome (Lantern Demonstration).
David Adlersberg and Ernst Hammerschlag, New York.
Discussion to be opened by Ralph Colp, New York, and Joseph B. Kirsner, Chicago.

The Diagnosis of Gastric Neoplasm by Cytologic Examination of Gastric Secretions.
Malcolm Block and Henry C. Bryant, Ann Arbor, Mich.
Discussion to be opened by Warren C. Hunter, Portland, Ore.

A Study of the Routine Use of Screening for the Detection of Liver Disease (Lantern Demonstration).
William D. Gambill, John E. Fisher, Bernard D. Rosenak and Rollin H. Moser, Indianapolis.
Discussion to be opened by Hugh R. Butt, Rochester, Minn.

Needle Biopsy of the Liver (Lantern Demonstration).
Leon Schiff, S. A. Safdi, R. C. Cogswell, G. W. Kumpe, D. F. Richkield and E. A. Gall, Cincinnati.
Discussion to be opened by Frederick W. Hoffbauer, Minneapolis, and Hans P. Popper, Chicago.

Thursday, June 24—9 a.m.

Business Meeting

Election of Officers

Chairman's Address: Correlation of Gastroenterology and Surgery.
Sara M. Jordan, Boston.

Possible Hazards of Diets High in Cholesterol in Coronary Disease (Lantern Demonstration).
Milton Plotz, Brooklyn.
Discussion to be opened by Louis N. Katz, Chicago.

The Surgical Treatment of Ulcerative Colitis (Lantern Demonstration).
Garnet W. Ault, Washington, D.C.
Discussion to be opened by Joseph Bank, Phoenix, Ariz.

Treatment of Idiopathic Ulcerative Colitis by Means of a Medical Ileostomy and Orally Administered Protein Hydrolysate Solution (Lantern Demonstration).
Thomas E. Machella, Philadelphia.
Discussion to be opened by T. Grier Miller, Philadelphia, and Sidney A. Portis, Chicago.

A Study of the Development of Anal Ducts and Glands, with Particular Reference to the Pathogenesis of Anorectal Disease. (Lantern Demonstration).
Malcolm R. Hill, Carroll S. Small and Lee Richards, Los Angeles.
Discussion to be opened by Henry W. Cave, New York.

Lymphomas of the Anorectum (Lantern Demonstration).
Emil Granet, M. B. Kagan and Cyril Solomon, New York.
Discussion to be opened by Walter A. Fansler, Minneapolis, and Claude C. Tucker, Wichita, Kan.

The Diagnosis of Intestinal Helminth Infections (Lantern Demonstration).
Elmer H. Loughlin, Brooklyn.
Discussion to be opened by Norman R. Stoll, Princeton, N. J., and Donovan C. Browne, New Orleans.

Polypoid Lesions of the Terminal Portion of the Colon with Special Relationship to Fulguration (Lantern Demonstration).
John R. Hill and Louis A. Buie, Rochester, Minn.
Discussion to be opened by Martin S. Kleckner, Allentown, Pa.

Friday, June 25—9 a.m.

JOINT MEETING WITH SECTION ON SURGERY, GENERAL AND ABDOMINAL, IN BALLROOM, SHERATON HOTEL

Newer Aspects of the Treatment of Ulcer (Lantern Demonstration). A. H. Aaron, Buffalo.

Vagotomy (Lantern Demonstration).
Keith S. Grimson, R. W. Rundles, George J. Baylin and H. M. Taylor, Durham, N. C.
Discussion on papers of Dr. Aaron and Drs. Grimson, Rundles, Baylin and Taylor to be opened by Lester R. Dragstedt, Chicago; Francis D. Moore, Boston; A. C. Ivy, Chicago; Waltman Walters, Rochester, Minn., and Walter L. Palmer, Chicago.

Nonspecific Inflammatory Lesions of the Terminal Ileum and Colon.
Russell S. Boles, Philadelphia.

Nonspecific Inflammatory Lesions of the Small and Large Bowel (Lantern Demonstration).
Leland S. McKittrick, Boston.
Discussion on papers of Drs. Boles and McKittrick to be opened by Clarence Dennis, Minneapolis; Burrill B. Crohn, New York; Lester R. Dragstedt, Chicago, and Everett D. Kiefer, Boston.

Diagnosis of Carcinoma of the Colon and Rectum (Lantern Demonstration).
Neil W. Swinton, Hugh F. Hare and William A. Meissner, Boston.
Discussion to be opened by Harry M. Weber, Rochester, Minn., and William H. Daniel, Los Angeles.

SECTION ON RADIOLOGY

MEETS IN BOULEVARD ROOM, SHERATON HOTEL

OFFICERS OF SECTION

Chairman—W. Walter Wasson, Denver.

Vice Chairman—Harry M. Weber, Rochester, Minn.

Secretary—U. V. Portmann, Cleveland.

Executive Committee—Edwin C. Ernst, St. Louis; Bernard P. Widmann, Philadelphia; W. Walter Wasson, Denver.

Wednesday, June 23—9 a.m.

Business Session

Chairman's Address: What Further Contributions Can Radiology Make to Medicine?
W. Walter Wasson, Denver.

Intervertebral Foramen Studies (Lantern Demonstration).
Lee A. Hadley, Syracuse, N. Y.
Discussion to be opened by L. Henry Garland, San Francisco, and Ralph K. Ghormley, Rochester, Minn.

A Basic Analysis of the Obstetric Pelvis by Roentgen Study (Lantern Demonstration).
William Snow, New York.
Discussion to be opened by J. P. Greenhill, Chicago, and Howard P. Doub, Detroit.

Angiocardiographic Visualization of the Pulmonary Artery in Health and Disease (Lantern Demonstration).
Charles T. Dotter and Israel Steinberg, New York.
Discussion to be opened by Harry M. Weber, Rochester, Minn., and Fred J. Hodges, Ann Arbor, Mich.

Lymphosarcoma: Its Diagnosis and Treatment.
Maurice Lenz, A. Purdy Stout, Orville L. Henderson and Josephine Sherman Wells, New York.
Discussion to be opened by Edward L. Jenkinson, Chicago, and Edwin C. Ernst, St. Louis.

Address.
Ellis Berven, Stockholm, Sweden.

Thursday, June 24—9 a.m.

Business Session

Election of Officers

Treatment of Stage I Carcinoma of the Cervix by Intracavitary Radium: Five, Ten and Fifteen Year End Results.
Juliette Baud, Paris, France.

Discussion to be opened by Harry H. Bowing, Rochester, Minn., and A. N. Arneson, St. Louis.

Some Factors Influencing the Response of Cancer of the Mouth and Throat to Radiation.
Constance A. P. Wood, London, England.

Discussion to be opened by A. Purdy Stout and Douglas Quick, New York.

Cancer of the Pharynx and Larynx.
Francois Baclesse, Paris, France.

Discussion to be opened by Juan A. del Regato, Columbia, Mo., and Maurice Lenz, New York.

Treatment and Results in Cancer of the Breast.
Stanford Cade, London, England.

Discussion to be opened by U. V. Portmann, Cleveland, and Robert J. Reeves, Durham, N. C.

The Present Position of Radiotherapy in Medical Practice.
B. W. Windeyer, London, England.

Discussion to be opened by Robert E. Newell, San Francisco, and Frederick W. O'Brien, Boston.

Friday, June 25—9 a.m.

JOINT MEETING WITH SECTION ON PREVENTIVE AND INDUSTRIAL MEDICINE AND PUBLIC HEALTH

Symposium on the Newer Aspects of Certain Occupational Dust Diseases

Beryllium

Chemical and Clinical Aspects (Lantern Demonstration).
Willard F. Machle, New York.

Pathologic Aspects (Lantern Demonstration).
Arthur J. Vorwald, Saranac, N.Y.

Radiologic Aspects.
Stanley A. Wilson, Salem, Mass.

Diatomite Pneumoconiosis: (Diatomaceous Earth)

Clinical Aspects.
Walter M. Anderson, Lompoc, Calif.

Pathologic Aspects.
William H. Carnes, Baltimore.

Radiologic Aspects (Lantern Demonstration).
Reginald H. Smart, Los Angeles.

Bauxite (Shaver's Disease)

Chemical and Physical Factors.
C. M. Jephcott, Niagara, Canada.

Pathologic Aspects.
A. R. Riddell, Toronto, Canada.

Clinical and Radiologic Aspects (Lantern Demonstration).
C. G. Shaver, Niagara, Canada.

PANEL DISCUSSION AND QUESTION AND ANSWER PERIOD AUDIENCE PARTICIPATION, WITH ARTHUR J. VORWALD, SARANAC, N.Y., AS MODERATOR AND THE CONTRIBUTORS TO THE JOINT PROGRAM AS SPEAKERS.

SECTION ON ANESTHESIOLOGY

MEETS IN BOULEVARD ROOM, SHERATON HOTEL

OFFICERS OF SECTION

Chairman—Ralph M. Tovell, Hartford, Conn.

Vice Chairman—Stuart C. Cullen, Iowa City.

Secretary—John S. Lundy, Rochester, Minn.

Executive Committee—Ansel M. Caine, New Orleans; Charles F. McCuskey, Los Angeles; Ralph M. Tovell, Hartford, Conn.

Wednesday, June 23-2 p.m.

Business Meeting for Presentation of Resolutions for House of Delegates

Preliminary Report of Committee on Operative Mortality (Lantern Demonstration).
Henry S. Ruth, Haverford, Pa., and Frederick P. T. Haugen, Portland, Ore., Co-Chairmen.

Chairman's Address: Anesthesiology in the Veterans Administration (Lantern Demonstration).
Ralph M. Tovell, Hartford, Conn.

The Relationship of the Anesthesiologist to the Hospital.
James R. Miller, Hartford, Conn.

Discussion to be opened by Charles F. McCuskey, Los Angeles, and H. Boyd Stewart, Tulsa, Okla.

The Functions of the American Board of Anesthesiology Past, Present and Future (Lantern Demonstration).
Paul M. Wood, New York.

Discussion to be opened by Ralph M. Waters, Madison, Wis., and Philip D. Woodbridge, Reading, Pa.

Brachial Plexus Block Anesthesia (Lantern Demonstration).
John J. Bonica, Tacoma, Wash.; Daniel C. Moore, Seattle, and Morton Orlov, Tacoma.

Discussion to be opened by James H. Crowley, St. Paul, and Robert L. Patterson, Pittsburgh.

Thursday, June 24-2 p.m.

Business Meeting

Election of Officers

An Acoustic Gas Analyser for Research in Anesthesiology (Lantern Demonstration).
Albert Faulconer Jr., Rochester, Minn.

Discussion to be opened by Charles D. Anderson and Mary Karp, Chicago.

A Clinical Appraisal of Methadon ("Amidone") and Its Isomers.
Jane E. Denton, Oliver H. Straus and Henry K. Beecher, Boston.

Discussion to be opened by Lieutenant Scott Whitehouse (MC), U.S.N.R., and Major Charles H. Mitchell, Medical Corps, United States Army.

Anesthetic Complications During and Following Chest Surgery (Lantern Demonstration).
K. K. Keown, Philadelphia.

Discussion to be opened by W. O. McQuiston, Peoria, Ill., and Ansel M. Caine, New Orleans.

The Effects of Various Methods of Premedication and Technics of Anesthesia as related to the Minute Volume Exchange (Lantern Demonstration).
Howard A. Bennett, Oklahoma City, and Stuart C. Cullen, Iowa City.

Discussion to be opened by Curtiss B. Hickcox, Philadelphia, and Paul H. Lorhan, Mission, Kan.

V 1
194

Caudal Sympathetic Block: A Comparison with Lumbar Sympathetic Block (Lantern Demonstration).
G. W. Curry, Cleveland.
Discussion to be opened by Ivan B. Taylor, Detroit, and Stuart C. Cullen, Iowa City.

Friday, June 25-2 p.m.

Laboratory Studies with Radioactive "Pentothal" (Lantern Demonstration).
J. L. Hollman, Rochester, Minn.
Discussion to be opened by Richard K. Richards, Chicago, and Edward B. Tuohy, Washington, D. C.

Quantitative Pharmacologic Studies with "Pentothal": A Preliminary Report (Lantern Demonstration).
E. A. Ravenstine and E. M. Pepper, New York.
Discussion to be opened by J. Eugene Ruben, Philadelphia, and J. E. Remlinger, Evanston, Ill.

Observations on the Use of "Pentothal Sodium" in Presence of Hepatic Damage.
Bruce M. Anderson, Oakland, Calif.
Discussion to be opened by W. Allen Conroy and Huberta M. Livingstone, Chicago.

"Dibenamine" Protection Against Cyclopropane Arrhythmias: Clinical Study with Continuous Electrocardiographic Recordings.
L. S. Goodman, H. O. Brown, Mark Nickerson and Scott M. Smith, Salt Lake City.
Discussion to be opened by A. E. Rapoport, Chicago, and R. J. Whitacre, East Cleveland, Ohio.

SECTION ON GENERAL PRACTICE OF MEDICINE

MEETS IN ROOM 2, NAVY PIER

OFFICERS OF SECTION

Chairman—Eric A. Royston, Los Angeles.

Vice Chairman—Milton B. Casebolt, Kansas City, Mo.

Secretary—Winfred B. Horn, Detroit

Executive Committee—Wingate M. Johnson, Winston-Salem, N.C.; Paul A. Davis, Akron, Ohio; Eric A. Royston, Los Angeles.

Wednesday, June 23--2 p.m.

JOINT MEETING WITH THE SECTION ON PREVENTIVE AND INDUSTRIAL MEDICINE AND PUBLIC HEALTH

Diagnosis and Treatment of Occupational Metal Poisoning.
Leonard Greenburg, New York.

Lead:

The Differential Diagnosis of Lead Poisoning: Accepted Laboratory Criteria (Lantern Demonstration).
Elston L. Belknap, Milwaukee.

The Treatment of Lead Poisoning (Should One Attempt to "Store Lead" or to "Unload"?)
William C. Wilents, Perth Amboy, N.J.

The Industrial Solvents:
Their Physiologic Effect (Lantern Demonstration).
John H. Foulger, Wilmington, Del.

Diagnosis and Treatment (Lantern Demonstration).
Rex H. Wilson, Akron, Ohio.

The Pneumoconioses: Which Industrial Dusts Are Inert? Which are Harmful? Why (Lantern Demonstration)?
L. E. Hamlin, Chicago.

Common Occupational Skin Diseases (Lantern Demonstration).
Nelson Paul Anderson, Los Angeles.

PANEL DISCUSSION AND QUESTION AND ANSWER PERIOD, AUDIENCE PARTICIPATION, WITH R. T. JOHNSTONE, LOS ANGELES, AS MODERATOR, AND THE CONTRIBUTORS TO THE JOINT PROGRAM AND OSCAR A. SANDER, MILWAUKEE, AS SPEAKERS.

Thursday, June 24--2 p. m.

Election of Officers

Chairman's Address: The Renaissance of the General Practitioner.
Eric A. Royston, Los Angeles.

Extraocular Malignant Melanoblastoma: A Clinical Study (Lantern Demonstration).
Marion S. Deweese, Ann Arbor, Mich.
Discussion to be opened by Udo J. Wile, Ann Arbor, Mich.

The Private Physician and Preventive Medicine (Lantern Demonstration). Bruce H. Douglas, Detroit.
Discussion to be opened by Paul A. Davis, Akron, Ohio.

The Diagnostic Significance of Failing Vision.
Lawrence T. Post, St. Louis.
Discussion to be opened by Paul O. Hageman, St. Louis.

The Nervous Factor in General Practice (Lantern Demonstration).
Frank N. Allan and Manuel Kaufman, Boston.
Discussion to be opened by John B. Dynes, Boston.

Friday, June 25-2 p. m.

The Do's and Don'ts of the Acute Abdomen.
Philip Thorek, Chicago.
Discussion to be opened by John Van Probaska, Chicago.

The Present Status of the Peptic Ulcer Problem (Lantern Demonstration).
S. Allen Wilkinson, Boston.

The Present Status of the Peptic Ulcer Problem.
S. Allen Wilkinson, Boston.
Discussion to be opened by Wingate M. Johnson, Winston-Salem, N. C.

Rheumatoid Spondylitis: Its Early Diagnostic Features and Management (Lantern Demonstration).
Richard Z. Query Jr., Charlotte, N. C.
Discussion to be opened by Edward F. Rosenberg, Chicago.

The Increase and Prolongation of Penicillin Plasma Concentration (Lantern Demonstration)
William P. Boger and Harrison F. Flippin, Philadelphia.
Discussion to be opened by Wallace E. Herrell, Rochester, Minn.

Diagnosis of Coarctation of the Aorta (Lantern Demonstration).
William L. Proudfit and A. Carlton Ernstene, Cleveland.
Discussion to be opened by O. T. Clagett, Rochester, Minn.

The Use and Misuse of Endocrine Therapy in Sterility (Lantern Demonstration).
Edward T. Tyler, Los Angeles.
Discussion to be opened by Willard O. Thompson, Chicago.

SECTION ON MISCELLANEOUS TOPICS

MEETS IN ROOM 2, NAVY PIER

Session on Allergy

OFFICERS OF SESSION

Chairman—Francis M. Rackemann, Boston.

Secretary—J. Harvey Black, Dallas, Texas.

Wednesday, June 23—9 a. m.

Chairman's Address.
Francis M. Rackemann, Boston.
Some Basic Facts and Problems of Clinical Allergy.
Frank A. Simon, Louisville, Ky.
Discussion to be opened by Jonathan Forman, Columbus, Ohio.

Climatotherapy in the Treatment of Allergic Diseases.
F. B. Schutzbank, Tucson, Ariz.
Discussion to be opened by L. O. Dutton, El Paso, Texas.

An Evaluation of Therapy in Infantile Eczema.
Lewis Webb Hill, Boston.
Discussion to be opened by A. V. Stoesser, Minneapolis.

Drug Allergy (Lantern Demonstration).
W. B. Sherman, New York.
Discussion to be opened by Marion B. Sulzberger, New York.

Immunologic and Morphologic Alterations in Hypersensitive States (Lantern Demonstration).
Gustave J. Dammin and Samuel C. Buhenta, St. Louis.
Discussion to be opened by Samuel M. Feinberg, Chicago.

Consideration of Water and Electrolyte Metabolism in Bronchial Asthma.
John M. Sheldon, Ann Arbor, Mich.
Discussion to be opened by John Warrick Thomas, Richmond, Va.

What Should the General Practitioner Do About Allergy?
Stearns S. Bullen, Rochester, N.Y.
Discussion to be opened by John H. Mitchell, Columbus, Ohio.

Diseases of the Chest

MEETS IN ROOM 2, NAVY PIER

OFFICERS OF SESSION

Chairman—Richard H. Overholt, Boston.

Secretary—J. Winthrop Peabody, Washington, D. C.

Thursday, June 24—9 a. m.

Laboratory Aspects of Streptomycin (Lantern Demonstration).
Emil Bogen, Los Angeles.

Streptomycin in Extrapulmonary Tuberculosis.
H. C. Minshaw, Rochester, Minn.

Streptomycin in Treatment of Tuberculosis (Lantern Demonstration).
Karl Pfuetze, Cannon Falls, Minn.

Experience with Treatment of Various Forms of Tuberculosis with Streptomycin in Veterans Administration (Lantern Demonstration).
William Tucker, Minneapolis.

The Use of Streptomycin in Surgical Patients.
Edward J. Beattie, St. Louis.

Antibiotics in Relation to Nontuberculous Disease of the Chest.
Chester S. Keefer, Boston.

Session on History of Medicine

MEETS IN ROOM 2, NAVY PIER

OFFICERS OF SESSION

Chairman—Howard Dittrick, Cleveland.

Secretary—Josiah C. Trent, Durham, N. C.

Friday, June 25—9 a. m.

Rupture of the Invertebral Disk: A Short History of its Evolution as a Syndrome of Importance to the Surgeon (Lantern Demonstration).
William J. Mixter, Boston.

Continuous Suction Drainage in the Treatment of Intestinal Obstruction: A Historical Evaluation (Lantern Demonstration).
John R. Paine, Buffalo.

The Development of Intestinal Intubation as a Practical Clinical Procedure: Introduction of the Double Lumen Tube (Lantern Demonstration).
T. Grier Miller, Philadelphia.

Modern Historical Aspects of Peripheral Nerve Surgery (Lantern Demonstration).
Barnes Woodhall, Durham, N. C.

Recent Developments in Antithyroid Drugs.
E. B. Astwood, Boston.

The First Successful Pneumonectomy and its Historical Significance. (Lantern Demonstration).
Rudolph Nissen, New York.

Session on Physical Medicine

MEETS IN ASSEMBLY ROOM, BUILDING OF THE AMERICAN MEDICAL ASSOCIATION

OFFICERS OF SESSION

Chairman—George Morris Piersol, Philadelphia.

Secretary—Frank H. Krusen, Rochester, Minn.

Thursday, June 24—9 a. m.

The Physical Treatment of the Hemiplegic Patient in General Practice (Lantern Demonstration).
Harold Dinken, Denver.

Therapeutic Possibilities of Microwaves ("Radar") (Lantern Demonstration).
Khalil G. Wakim, Julia F. Herrick, Gordon M. Martin, and Frank H. Krusen, Rochester, Minn.

Rehabilitation and General Practice.
Howard A. Rusk, New York.

Psychiatric Aspects of Physical Medicine.
Winfred Overholser, Washington, D. C.

Intermission

Panel Discussion on Physical Medicine in General Practice

George M. Piersol, Philadelphia, Moderator

Physical Treatment of Common Disorders of the Feet (Lantern Demonstration).
Frances Baker, San Francisco.

Physical Treatment of Backache (Lantern Demonstration).
Frederic J. Kottke, Minneapolis.

Physical Treatment of Peripheral Vascular Diseases.
Sedgwick Mead, St. Louis.

Physical Treatment of Shoulder Lesions (Lantern Demonstration).
Donald L. Rose, Kansas City, Kan.

V 1
194

THE SCIENTIFIC EXHIBIT

The Scientific Exhibit will be located on Navy Pier at the East end of the Convention Hall.

The seventeen sections of the Scientific Assembly have arranged groups of exhibits dealing with the various specialties of medicine, but these exhibits will be presented for the benefit of the physician in general practice rather than for the specialist. The Committee on Scientific Exhibit is sponsoring three special exhibits on fractures, physical medicine and fresh pathologic material; other subjects which will receive special attention are atomic energy, cancer and diabetes. Conferences on diabetes will be conducted in a room adjacent to the exhibit throughout the week. Motion pictures will be shown continously throughout the week in two theaters adjacent to the exhibit.

Admission to the Scientific Exhibit will be limited to persons wearing the Fellowship badge or other official badge of the Convention. The public will not be admitted to the Scientific Exhibit.

THOMAS G. HULL, Director,
Scientific Exhibit.

SPECIAL EXHIBITS

The Committee on Scientific Exhibit is sponsoring three special exhibits—fractures, fresh pathologic material and physical medicine.

Special Exhibit on Fractures

The Special Exhibit on Fractures is presented for the seventeenth time under the auspices of the following committee:

Kellogg Speed, Chicago, chairman.

Frederick A. Jostes, St. Louis.

Gordon M. Morrison, Boston.

The exhibit will be accompanied by continuous demonstrations throughout the week on the following subjects:

Compression Fracture of the Spine.

Fractures of the Ankle.

Fracture of the Carpal Navicular.

Fracture of the Lower End of the Radius.

Fracture of the Shaft of the Femur.

Supracondylar Fracture of the Humerus.

A pamphlet giving the essential features of the exhibit will be distributed.

The following orthopedic surgeons will assist the committee with the demonstrations:

Ronald B. Adams, Boston.
Carroll Glenn Barber, Cleveland.
Richard J. Bennett Jr., Chicago.
Herbert L. Brumbough, Dayton, Ohio.
James J. Callahan, Chicago.
Kenneth Christoph, Brookline, Mass.
Carl B. Davis Jr., Chicago.
Arthur E. Diggs, Chicago.
Egbert H. Fell, Chicago.
Nicholas J. Giannestras, Cincinnati.
Harry B. Hall, Minneapolis.
E.A. Hamilton, Chicago.
Robert E. Ingersoll, Boston.
Burton C. Kilbourne, Chicago.
J. Whitfield Larrabee, Hartford, Conn.
John L. Lindquist, Chicago.
Robert T. McElvenny, Chicago
Robert B. McKnight, Tulsa, Okla.
John J. Milroy, Lake Forest, Ill.
Frank G. Murphy, Chicago.
Benjamin E. Odetts, Buffalo.
Manley A. Page, Chicago.
Charles N. Pease, Chicago.
Sheppard Remington, Chicago.
John C. Richter Jr., Chicago.
Robert O. Ritter, Chicago.
Samuel L. Robbins, Cleveland.
Maurice B. Roche, St. Louis.
Carlo S. Seuderi, Chicago.
Harold A. Sofield, Chicago.
James K. Stack, Chicago.
Dudley H. Stewart, Toledo, Ohio.
Russell F. Sullivan, Brookline, Mass.
James R. Tillotson, Lima, Ohio.
Samuel L. Turek, Chicago.
Vernon C. Turner, Evanston, Ill.
Theodore H. Vinke, Cincinnati.
Herbert B. Virgin Jr., Miami, Fla.
Kenneth H. Boston, Philadelphia.
Edgar White, Cincinnati.
Charles Francis Wood, Louisville.
Chester R. Zeiss, Chicago.

Special Exhibit on Fresh Pathologic Material

The Special Exhibit on Fresh Pathologic Material is presented with the cooperation of the Section on Pathology and Physiology under the auspices of the following committee:

I. Davidsohn, Mount Sinai Hospital, Chicago, chairman.

G.A. Bennett, University of Illinois College of Medicine, Chicago.

P.R. Cannon, University of Chicago School of Medicine, Chicago.

S.A. Levinson, University of Illinois College of Medicine, Chicago.

J.F. Sheehan, Loyola University School of Medicine, Chicago.

J.P. Simonds, Children's Memorial Hospital, Chicago.

W.B. Wartman, Northwestern University Medical School, Chicago.

An advisory committee has been appointed to assist the general committee, and includes the following members:

Alvin G. Foord, Pasadena, Calif.
George M. Hass, Chicago.
Edwin F. Hirsch, Chicago.
Frank W. Konzelmann, Atlantic City, N.J.
Harrison S. Martland, Newark, N.J.
J.J. Moore, Chicago.
Hans Popper, Chicago.
Otto Saphir, Chicago.

Demonstrations will be conducted from Monday morning to Friday noon from 10 a.m. to 1 p.m. and 1:30 to 4:30 p.m. Many of the hospitals in Chicago are cooperating, and fresh material of an interesting nature will be supplied daily. A large group of competent pathologists will aid in the program and conduct the demonstrations.

Special Exhibit on Physical Medicine

The Special Exhibit on Physical Medicine includes Physical Therapy, Occupational Therapy and Rehabilitation. It is presented for the third time under the auspices of the following committee:

Frank H. Krusen, Rochester, Minn., chairman.
Winifred Overholser, Washington, D. C.
Howard A. Rusk, New York.

J.F. HERRICK and E.J. BALDES, Mayo Foundation, Institute of Experimental Medicine, Rochester, Minn.:

Ultrasonics in Medicine: Devices for producing high frequency sound waves will be shown, and the possibilities for use of these waves in medicine will be indicated.

K.G. WAKIM and D.J. ERICKSON, Sections on Experimental Physiology and Physical Medicine, Mayo Clinic, Rochester, Minn.:

Electrical Stimulation of Muscles: The results of experimental studies on electrical stimulation of muscles will be demonstrated, and devices for this purpose will be shown.

O. LEONARD HUDDLESTON and JAMES G. GOLSETH, Department of Physical Medicine, University of Southern California School of Medicine, and Los Angeles County General Hospital, Los Angeles:

Clinical Electromyography: The exhibit will consist of electromyograms, charts, drawings and photographs dealing with various clinical observations in neuromuscular disorders using electromyography. There will also be demonstrations of the procedure on various types of neurologic patients.

H. WORLEY KENDELL, ELLA V. FAY and BEATRICE WADE, American Occupational Therapy Association and University of Illinois College of Medicine, Department of Physical Medicine, Chicago:

Occupational Therapy: There will be actual demonstrations on patients, varying the patients from day to day. Included will be cerebral palsy, paraplegia, poliomyelitis, general medical cases and arthritis.

HOWARD A. RUSK and DONALD A. COVALT, New York University School of Medicine, New York, and MILDRED ELSON and CATHERINE WORTHINGHAM, American Physical Therapy Association, New York:

Rehabilitation in Late Poliomyelitis: Methods and devices for the late rehabilitation of patients with poliomyelitis will be demonstrated with actual patients.

FRANCES A. HELLEBRANDT, Baruch Center on Physical Medicine, Medical College of Virginia, Richmond:

Hydrotherapy: Hydrotherapeutic procedures of use to the general practitioner will be demonstrated.

A. RAY DAWSON, LOUIS B. NEWMAN, ROBERT BOYLE, EDWARD E. AVERY and A.B.C. KNUDSON, Veterans Administration, Washington, D.C.:

Physical Medicine and Rehabilitation in Tuberculosis and Thoracic Surgery: The ultimate goal in the rehabilitation of patients with tuberculosis and other diseases of the chest is not only the physical recovery of these persons but their training for future economic independence. The exhibit will include charts, photographs, slides, motion pictures and apparatus showing the various rehabilitation activities. Patients will also be demonstrated.

HENRY H. KESSLER, New Jersey Rehabilitation Clinic, Newark, N.J.:

Rehabilitation of Amputees: This exhibit will present methods of rehabilitating persons who have major amputations of upper or lower extremities. Proper use of the prosthesis will be demonstrated by patients.

The following demonstrators will assist in the presentation of the exhibit:

Frances Baker, San Francisco.
Harold Dishon, Denver.
Arthur C. Jones, Portland, Ore.
W. Jerome Lee, Richmond, Va.
Sedgwick Mead, St. Louis.
C. O. Molander, Chicago.
W. D. Paul, Iowa City.
Donald L. Rose, Kansas City, Kan.
Herman L. Rudolph, Reading, Pa.
Walter M. Solomon, Cleveland.
Augustus Thorndike, Boston.
George D. Wilson, Asheville, N. C.
Walter J. Zeiter, Cleveland.

SECTION EXHIBITS

Each of the seventeen sections of the Scientific Assembly has arranged a group of exhibits dealing with the various branches of medicine.

Section on Internal Medicine

The representative to the Scientific Exhibit from the Section on Internal Medicine is Thomas C. Garrett, Philadelphia.

MARGARET CHIEFFI, LILLI HOFSTATTER, ESBEN KIRK and WILLIAM B. KOUNTZ, Washington University School of Medicine and St. Louis Infirmary Hospital, St. Louis:

Changes in Man Associated with Age: The exhibit presents a further evaluation from a physiologic and anatomic point of view of changes associated with age in man. Attempts at modification of certain functions are made by the administration of hormones.

GRAHAM ASHER, LAWRENCE STEFFEN and FRANKLIN D. MURPHY, University of Kansas School of Medicine, Kansas City, Kan.:

Subclinical Tetany, Its Recognition and Treatment: The exhibit describes studies on the incidence of low mineral diets in hypertension and angina; blood calcium studies in hypertension with and without evidence of subclinical tetany; subclinical tetany, definition, symptoms and signs; demonstration of a useful sign in myotactic irritability; influence of diet; electrocardiographic changes; associated deficiencies, and adjunctive treatment.

EMANUEL SCHWARTZ, LOUIS LEVIN, HARRY LEIBOWITZ, I. M. KURTZ, J. FLETCHER, J. F. KELLY and J. WOLF, Long Island College of Medicine and Long Island College Hospital, Brooklyn:

Histamine Antagonists: A comparative experimental and clinical study of "pyribenzamine," "benadryl," "antistin," "neohetramine," "thephorin" (Nu 1504), "histadyl" (01013) and "neoantergan" is presented. The effects of the antihistaminic drugs on histamine and allergic cutaneous wheals are illustrated, and cumulative data relating to their clinical value and limitations are presented.

PAUL N. UNGER, MURRAY WEINER and SHEPARD SHAPIRO, New York University College of Medicine, New York:

Vitamin K Tolerance Test: The prothrombin response to the parenteral administration of large doses of synthetic vitamin K is determined after resting levels have been established. Serial estimations of the diluted (12.5) plasma prothrombin time are made. In the presence of normal hepatic function the prothrombin time remains normal or becomes temporarily reduced to hyperprothrombinemia levels. When function of the liver is impaired, the existing hypoprothrombinemia fails of correction or, if the resting level is normal, it becomes temporarily prolonged. A total of 113 patients have been studied, the results of the test being correlated with other liver function tests and, in addition, biopsy studies in a significant number of the patients. The results demonstrate that the vitamin K tolerance test can be used as a sensitive and reliable indicator of over-all hepatic dysfunction.

STUART W. McLROD, Rochester General Hospital, Rochester, N.Y.:

Pathologic Physiology of Barbiturate Poisoning: The exhibit demonstrates the types of observations that should be made during acute barbiturate intoxication. The important effect of barbiturates in toxic amounts in paralyzing the action of the ciliated epithelium of the bronchi is emphasized as well as the pulmonary complications which develop by virtue of this effect. The effect of anoxia secondary to the pulmonary complications in further depressing the central nervous system is presented. Methods of therapy based on the pathologic physiology of the disease are shown. The purpose of the exhibit is to consider barbiturate poisoning as a separate disease which, like any other disease, has an evolution.

DAVID CAYER, Bowman Gray School of Medicine, Winston-Salem, N.C.:

Vitamin Requirements in Health and Disease—Comparison of Clinical and Laboratory Data: The exhibit depicts levels of fat soluble, C and B complex vitamins in patients. Photographs and roentgenograms of patients, diagrams of vitamin metabolism, indications for use and suggested dosages are included. The diagnosis by signs, symptoms and vitamin levels in the blood plasma and urine are considered. Vitamin levels have been measured in patients maintained on restricted therapeutic diets, and with pernicious anemia, sprue, hepatic disease, acute and chronic infections and cancers. The effect of roentgen therapy on the vitamin excretion levels is also noted. The need for an adequate intake of each of the vitamins rather than excessive administration of any one group in an over-all plan of treatment of the individual patient is emphasized.

LOUIS KRASNO, University of Illinois College of Medicine, MARY KARP and PAUL S. RHOADS, Northwestern University Medical School, Chicago:

Inhalation of Penicillin Dust: A new method of administering penicillin involves the inhalation of the fine aerosol particles of dry pulverized penicillin. This method has simplified the mechanics of aerosol therapy, thus extending its scope more readily for office and home treatment. The original device and several modifications of the apparatus are presented. Bacteriologic findings of throat, nose and sputum cultures before and after inhalation therapy are demonstrated, and blood level determinations on a series of patients are illustrated. Clinical results are based on treatment of over 600 patients by this method.

CHARLES LEROY STEINBERG, Rochester General Hospital, Rochester, N.Y.:

Primary Fibrositis (Dupuytren's Contracture): The exhibit describes the pathology, symptomatology, biochemical blood changes and treatment with tocopherols of primary fibrositis. Primary fibrositis is overdiagnosed in Great Britain and on the Continent. It is underdiagnosed in the Western Hemisphere. Dupuytren's contracture is a form of primary fibrositis which is common but is not often diagnosed because it is not thought of in routine physical examinations. It may be the one objective evidence leading to a diagnosis of primary fibrositis.

MICHAEL A. RUBINSTEIN, Montefiore Hospital, New York:

Multiple Myeloma - Its Relation to Leukemia: The clinical, biochemical, pathologic and cytologic characteristics of multiple myeloma are described, and the criteria for differential diagnosis are discussed. Points of distinction between multiple myeloma and leukemia cannot be regarded as fundamental, and there is no sharp demarcation between the two diseases. Instances are abstracted in which cases of multiple myeloma manifest the various characteristics of leukemia and vice versa. Chemotherapy of multiple myeloma is reviewed.

W. PAUL HOLBROOK, DONALD F. HILL, CHARLES A.L. STEPHENS JR., LEO J. KENT and EDNA McCARTHY, Tucson, Ariz.:

Treatment of Rheumatoid Arthritis: Treatment of rheumatoid arthritis is presented with basic outline, optional, doubtful and worthless methods. Emphasis is given on prevention and correction of deformity with pictures, roentgenograms, charts and demonstrations. Special attention to knee contractions and correction with manipulation in approximately 70 cases is included.

CHARLES A.R. CONNOR, American Heart Association, New York:

Heart Disease: The exhibit gives general aims, purposes and programs of the American Heart Association.

H.M. MARVIN, American Council on Rheumatic Fever, American Heart Association, New York:

Rheumatic Fever: The exhibit of the American Council on Rheumatic Fever of the American Heart Association covers some phases of rheumatic fever and rheumatic heart disease.

ANTON S. YUSKIS and GEORGE C. GRIFFITH, University of Southern California School of Medicine and Los Angeles County General Hospital, Los Angeles:

Orthostatic Hypotension and Orthostatic Tachycardia, Observations in color of the vascular postural changes occurring in the retinal vessels in the syndrome of orthostatic hypotension and orthostatic tachycardia are shown. Normal postural vascular responses are also described. The effect of orthostatic hypotension on cardiac rhythm as shown in the electrocardiogram is demonstrated. The effect of treatment with "paredrine hydrobromide" is demonstrated, especially on the changes produced in the retinal vessels. These clinical observations are demonstrated as additional evidence that the possible cause for this syndrome is the abnormally low venous-capillary tone in the lower extremities.

ESTHER MEYER and MARVIN KAGEN, University of Illinois College of Medicine, Chicago:

Mycologic Diagnosis: The salient features of the symptoms and signs of the deep and superficial fungous diseases are listed, along with the specific drugs used in therapy. The methods of making mycologic diagnoses are illustrated and described. Sketches of the microscopic observation giant colonies, transparencies of the cutaneous lesions and anaerobic cultures are presented. The aim will be to give the general practitioner an approach to making a diagnosis of a fungous disease.

JOHN K. LATTIMER, J. BURNS AMBERSON, WILLIAM H. STEARNS, JOSEPH SCHWARTZ, ROWLAND GOODMAN and WILLIAM J. EAST, Kingsbridge Veterans Hospital, New York:

Streptomycin Therapy of Tuberculosis - Genitourinary System: Drawings, charts and photographs depict the pathogenesis of genitourinary tuberculosis and the methods and limitations of streptomycin therapy. Symptomatic results, bacteriologic methods and results, cystoscopic observations, toxicity and resistance to the drug are demonstrated.

ARTHUR LACK, TRAVIS WINSOR and WILLIAM ADOLPH, University of Southern California School of Medicine, Los Angeles, and Birmingham Veterans Administration Hospital, Van Nuys, Calif.:

Biomicroscopy of Conjunctival Vessels in Hypertension: Exhibit demonstrates a clinical method of direct visualization of bulbar conjunctival vessels with magnifications up to two hundred and forty times. Characteristics of normal vascular patterns and streamline flow are presented by charts and diagrams. Analysis of 100 hypertensive patients studied by this method reveals characteristic morphologic observations in the arterioles and capillaries. Most striking are the changes in the capillary bed, which suggest a hypertensive pattern characterized by (1) initial widespread narrowing or constriction throughout the capillary loops; (2) elongation with abnormal loopings; (3) progressive development of fixed tortuosities and sharp angularities; (4) loss of normal distensibil-

ity, and (5) thickening of capillary walls (confirmed by histologic study of necropsy material).

Section on Surgery, General and Abdominal

The representative to the Scientific Exhibit from the Section on Surgery, General and Abdominal, is Walter G. Maddock, Chicago.

WALTMAN WALTERS, with the assistance of HAROLD A. NEIBLING, and BRADLEY C. BROWNSON and SPENCER K. PHILLIPS, Mayo Clinic, Rochester, Minn.:

Vagotomy for Peptic Ulcer - Favorable and Unfavorable Results After a Two Year Experience: The exhibit presents a two year follow-up study of favorable and unfavorable results of vagotomy for peptic ulcer. The study includes (1) anatomic studies of vagi by means of photographs, gross specimens, drawings and models; (2) salient points in the surgical technic of transabdominal resection of the vagus nerve; (3) postoperative motility disturbances, as shown by preoperative and postroentgenograms and balloon studies; (4) changes in gastric acidity, and (5) healing or recurrence of ulceration, following vagotomy or vagotomy combined with supplemental gastric surgical procedures. Abstracts of case histories show that there is a lack of positive correlation between relief of clinical symptoms in insulin-negative and insulin-positive patients; relief of gastrospasm and ulcer pain following vagotomy (which causes dilation of the stomach) is not to be interpreted as healing of ulcer; the abdominal approach in a case of suspected peptic ulcer may save the patient from being subjected to vagotomy in the absence of ulcer.

W. E. ADAMS and JAMES M. FRITZ, University of Chicago, Department of Surgery, Chicago:

Congenital Cystic Malformation of the Lung—Pathologic Characteristics and Differential Diagnosis: The exhibit of clinical and pathologic material of 17 representative patients (out of a total of 34 treated) emphasizes the problem of differential diagnosis in this lesion. The exhibit includes roentgenograms, photographs and photomicrographs in addition to tables.

RICHARD B. CATTELL and NEIL W. SWINTON, Lahey Clinic, Boston:

Pathogenesis of Carcinoma of Rectum and Colon: The incidence of polyps of colon and rectum, their importance in the pathogenesis of carcinoma and their relation to multiple cancers of the large intestine are shown. The methods of treatment—fulguration, colostomy and resection—are illustrated.

GROVER C. PENBERTHY, C. N. WELLER, R. J. NOER and J. L. POSCH, Wayne University College of Medicine, Children's Hospital of Michigan and Detroit Receiving Hospital, Detroit:

Treatment of Burns: The treatment of burned patients is described, including a presentation of physiologic disturbances produced by severe burns and means for restoring the patient's normal status. The treatment of the burned surfaces includes presentation of types of dressings and principles of early epithelial replacement.

JACOB J. WEINSTEIN, George Washington University School of Medicine, Washington, D.C.:

Parenteral Proteins in Surgery: The exhibit shows (1) the indications for parenteral proteins in both surgical and medical cases; (2) tolerance studies with parenteral protein hydrolysate by intravenous, subcutaneous and intramuscular routes; (3) the physiologic and histologic alterations associated with probable deficiencies; (4) postoperative blood deficiency in various surgical procedures with particular reference to the nitrogen loss and the effect on the blood proteins and hemoglobin; (5) clinical results, showing the effects of protein hydrolysate in various surgical procedures on patients who have received protein therapy and (6) toxicities, describing reactions for the entire study.

R. W. POSTLETHWAIT, H. LEE HOWARD and PAUL W. SCHANHER, Duke University School of Medicine, Durham, N.C.:

Nonreactive Absorbable Glove Powder: Transparencies illustrate the gross and microscopic lesions produced by talc implantation into various tissues in animals. Similar sections show little or no reaction when a starch powder is used. Appropriate case histories demonstrate the clinical importance of this reaction to talc and the necessity of obtaining a satisfactory substitute.

HERBERT CONWAY, CLARENCE R. STRAATSMA, CORNELIUS J. KRAISSL, ROBERT H. CLIFFORD, JEROME GELB, LEO L. LEVERIDGE, JULIUS M. JOSEPH, SAMUEL CLIMO and RICHARD B. STARK, Veterans Hospital, Bronx, N.Y.

Plastic and Reconstructive Surgery—Reconstruction of External Ear, Closed Abdominal Flaps and Crossed Leg Flaps: Moulages demonstrate the phases of reconstruction of congenital, traumatic and postoperative defects of the external ear. Photographs and moulages show the use of abdominal flaps, skin lined, to cover defects of the face and of the upper and lower extremities. Photographs and drawings present the use of pedicle flaps consisting of full thickness of skin and subcutaneous tissue from one leg to cover defects of the opposite extremity.

CLAIRE L. STRAITH, WILLIAM G. McEVITT, MATTHEW PILLING and JOHN R. LEWIS, Straith Clinic for Plastic Surgery, Detroit:

Automobile Injuries: New statistics are presented from a survey made by the Detroit Police Department, demonstrating the great hazards of riding in the "guest passenger" seat as compared with the driver's seat. Typical injuries received in various positions in the car are demonstrated. Principles of plastic repair useful to the physician, intern and general surgeon, who usually are called to treat these accidental injuries, are shown as well as some suggestions for subsequent repair of major defects for the rehabilitation of these accident victims. Suggestions are given for the improvement of automobile body design and protection of passengers from crushing facial injuries.

JAMES BARRETT BROWN, L. T. BYERS, FRANK McDOWELL and MINOT P. FRYER, St. Louis:

Congenital Deformities Repaired by Plastic Surgery: Congenital deformities of the face including cleft lips, defects and absence of the ears, ptosis of the eyelids and distortions of the nose and jaw account for a large number of patients who need surgical treatment and whose defects are amenable to surgical restoration. Illustrative photographs of these lesions along with records of what may be done to relieve the difficulties of these patients are presented.

LOUIS A. BUIE, N. D. SMITH, R. J. JACKMAN and J. R. HILL, Mayo Clinic, Rochester, Minn.:

Fulguration of Polypoid Lesions of the Terminal Portion of the Colon: The exhibit is based on a study of a large series of cases of polypoid

V 1
194

disease of the colon. Especial attention is directed toward fulguration of polyps of the terminal portion of the colon. Moulages are employed to show various types of polyps and the frequency of their occurrence in different segments of the colon. Similarity of the situation of polyps and carcinoma in various areas of the large intestine is shown by diagrams. Lesions may be observed through proctoscopes which are in position in moulages of the anus and rectum. The observer may demonstrate for himself the performance of fulguration by utilizing electrical appliances which are provided.

L. B. WOOLNER and JOHN B. McDONALD, Mayo Clinic, Rochester, Minn.:

Cancer Cells in Sputum and Bronchial Secretions, an Aid in Diagnosis of Bronchogenic Carcinoma: The exhibit shows the clinical value of cytologic examination of sputum and bronchial secretions as an aid in the diagnosis of bronchogenic carcinoma. It includes *(a)* the technic of collection of material and the fixation and staining of smears, *(b)* the cytology of normal sputum, *(c)* the demonstration of cancer cells in sputum and bronchial secretions originating from the various histologic types of carcinoma of the lung, *(d)* case histories illustrating the diagnostic value of this method and *(e)* an analysis of the data on 150 consecutive cases in which the sputum or bronchial secretions were positive for carcinoma cells.

JERE W. LORD Jr., LESTER BREIDENBACH, FREDERIC W. BANCROFT, THOMAS J. O'KANE and S. POTTER BARTLEY, New York and Brooklyn Regional Committee on Fractures and Trauma of the American College of Surgeons, New York:

Management of Arterial Emergencies: The management of injuries to a major artery resulting from an accident outside of the hospital or an injury during the course of an operation is presented. Vascular equipment, first aid and emergency hospital treatment, definitive surgical procedure and postoperative care are outlined and illustrated. The surgical management of arterial emboli is discussed. Organization of vascular teams within each hospital is suggested to carry out these procedures.

GEORGIA PRICE and ELIZABETH F. CARR, Northwestern University Medical Library, Chicago:

Literature Illustrating the History of Surgery: This exhibit includes a collection of the outstanding books on surgery from the earliest printed works up to about the middle of the Nineteenth Century, and pictures of many outstanding men in the history of surgery.

ROY D. McCLURE, L. S. FALLIS, A. B. McGRAW, C. R. LAM, B. E. BRUSH and D. E. SZILAGYI, Henry Ford Hospital, Detroit:

Treatment of Acute Suppurative Appendicitis: Charts and graphs show comparative results in the treatment of this condition during the past 10 years. Details of diagnosis, preoperative care, surgical technic and postoperative care most important for obtaining good results are set forth in charts, diagrams and drawings.

JOHN D. STEWART, SIDNEY M. SCHAER, W. H. POTTER and ALFRED J. MASSOVER, University of Buffalo School of Medicine, Buffalo:

Management of Massively Bleeding Gastroduodenal Ulcer: Principles of management are tabulated, team work and preoperative resuscitation are described, and illustrative specimens and case histories are shown. Laboratory observations, including blood volume data, and their value in relation to therapy are analyzed. The operative technic is depicted, and the results in a series of cases are tabulated.

HILGER PERRY JENKINS, HOWARD REISER, DAVID S. FOX and RUDOLPH JANDA, University of Illinois College of Medicine and Woodlawn Hospital, Chicago:

Wounds of the Heart—New Experimental Method for Control of Hemorrhage: In an experimental study on animals the hemorrhage from wounds of the ventricles, the auricles and the coronary vessels was controlled by the application of a patch of gelatin sponge. Photographs demonstrate the method used with improvements in the technic of applying the sponge. The pathologic studies, gross and microscopic, demonstrate the healing of the wound and the ultimate absorption of the gelatin sponge. The clinical application of this experimental method, with its merits and limitations, is outlined.

THOMAS A. SHALLOW, KENNETH E. FRY and FREDERICK B. WAGNER Jr., Jefferson Medical College Hospital, Philadelphia:

Parathyroid Adenoma—Clinical Problems: The key features in diagnosis and treatment of this disorder are reviewed. These are amply illustrated from personal cases which emphasize the problems in diagnosis, the various stages of the disease and the complications in the preoperative as well as the postoperative patient. The occurrence of this disease in both father and daughter is also portrayed.

J. ROSS VEAL, HUGH H. HUSSEY and JOHN SHADID, Georgetown University School of Medicine, Washington, D.C.:

Impaired Venous Circulation: The exhibit demonstrates the causes and effect of impaired venous circulation on the extremities. The early and late signs and symptoms of impaired venous circulation of the extremities are illustrated. The methods of diagnosis and differentiation are shown, together with the complications and treatment of the various phases of impaired venous circulation of the extremities.

GEORGE CRILE Jr. and WILLIAM S. DEMPSEY, Cleveland Clinic, Cleveland:

Indications for Removal of Nontoxic Adenomas of the Thyroid: The low incidence of carcinoma of the thyroid in necropsy material and vital statistics is compared with the high incidence of carcinoma found by the surgical pathologist. The difference in these figures results from the screening out of patients with innocuous adenomas who do not consult a surgeon. Indications for removal of selected nontoxic adenomas are given.

ROY G. KLEPSER, Georgetown University School of Medicine, Washington, D.C.:

Treatment of Abscess of the Lung: The exhibit presents the etiology and pathogenesis of pulmonary abscess, with results of chemotherapy, drainage and resection, based on an analysis of treatment of 200 consecutive pulmonary abscesses. Abscess of the lung in children is portrayed, and drawings illustrate the method of drainage. Indications for drainage and indications for resection of the lung are given.

BOWMAN C. CROWELL and MALCOLM T. MacEACHERN, American College of Surgeons, Chicago:

Cancer, Surgery, Fractures, Industrial Health and Hospital Rating: The exhibit depicts standards for cancer clinics, cancer detection centers, medical

service in industry, graduate training in surgery and the point rating system for hospitals.

HAROLD LINCOLN THOMPSON and HARRY C. PROUT, Los Angeles:

Vagus Resection in the Treatment of Peptic Ulcer: The exhibit reviews the results in approximately 100 unselected cases in which vagus section was applied in the surgical treatment of peptic ulcer. The cases are collected from private and charity hospitals where operation was performed by resident and attending surgeons. It is believed that the cases illustrate average results being obtained at the present time from an operation as applied in general surgical practice.

ROBERT A. GROFF and JOSEPH C. YASKIN, Graduate School of Medicine, University of Pennsylvania, Philadelphia:

Technic of Pain Control: Neurosurgical methods of pain control and technic of rhizotomy, nerve section, chordotomy, sympathectomy and lobotomy for intractable pain due to neuralgias, causalgias and cancer are illustrated. Tic douloureux, glossopharyngeal neuralgia and peripheral vascular disease (Raynaud's disease, Buerger's disease) are considered.

HAROLD LAUFMAN, WAYNE B. MARTIN and STANLEY W. TUELL, Northwestern University Medical School, Chicago:

Vasospasm--An Experimental Study: The pattern of vasospasm subsequent to arterial and venous occlusions with particular emphasis on the importance of vasospasm in the recovery of strangulated intestine is demonstrated. Postocclusive vasospasm and the behavior of the blood stream in the smaller radicles under these conditions have a broad implication in the basic pathologic physiology of occlusive vascular disease in other parts of the body. Photographs of the apparatus and employment of the technics demonstrate the use of direct micrometry in measuring the caliber of the minute blood vessels. The effects of various therapeutic measures such as sympathetic nerve section and use of vasodilating drugs, oxygen and anticoagulants are shown by direct vision of microscopic blood vessels.

BERNARD JUDOVICH, WILLIAM BATES, GOLDA NOBEL and JAMES DUNN, University of Pennsylvania Graduate School of Medicine, Philadelphia:

Technic of Pain Control: Methods of pain control by local and regional injection are shown, with the technic of paravertebral nerve and sympathetic ganglion block. Pain syndromes include occipital neuralgia, scalenus anticus syndrome, postcoronary pain in shoulder, arm and hand, segmental neuralgias of chest and abdominal walls, painful scars, neuralgic phase of low back pain, sciatic pain and herpes zoster. Physical therapy for pain, use of the ammonium salts for nerve block and Coley's fluid for pain are illustrated.

ARNOLD S. JACKSON, Jackson Clinic, Madison, Wis.:

Hyperthyroidism--Diagnosis and Treatment: Use of Propylthiouracil, Iodine and Surgery: The exhibit demonstrates various aspects of hyperthyroidism--the diagnosis, the use of iodine and propylthiouracil therapy and the various steps in the surgical removal of goiter. Special attention is given to the use of propylthiouracil, and photographs and charts demonstrate the effect of this drug on cases of hyperthyroidism in children as well as adults. Indications for and against the use of the drug as determined by a study of 175 cases of toxic goiter are discussed.

Section on Obstetrics and Gynecology

The representative to the Scientific Exhibit from the Section on Obstetrics and Gynecology is Frederick H. Falls, Chicago.

WILLIAM BICKERS, Richmond, Va.:

Dysmenorrhea: Exhibit presents study of the endometrial pattern, basal temperature curve and myometrial contraction patterns, and intrauterine pressures in patients with dysmenorrhea. The intrauterine balloon technic for recording uterine contractions is presented. Treatment is discussed. Technic for recording the uterine contractions on the intact rabbit uterus will also be shown along with tracings to demonstrate the relation between animal and human uterine contraction patterns.

MONTE SALVIN, Los Angeles:

Uterotubal Insufflation-Use of Penicillin and Streptomycin Aerosols: The exhibit shows a model of the female pelvis containing cervix, uterus, tubes, ovaries and the openings from the fimbriated ends of the tubes into the peritoneal cavity together with an apparatus to vaporize penicillin and streptomycin and the introduction of the vapor by a cannula through the cervix, uterus and fallopian tubes to the peritoneal cavity. Charts show indications and results.

FREDERICK H. FALLS, University of Illinois College of Medicine, and CHARLOTTE S. HOLT, Illinois State Department of Public Health, Chicago:

Carcinoma of the Uterus: Charts, models, drawings and graphs depict carcinoma of the cervix and body of the uterus. Particular emphasis is placed on the pathology, gross and microscopic, and on the associated pathology. Etiologic factors are pointed out and diagnostic procedures for the detection of early carcinoma are described. Methods of treatment are shown together with statements concerning the results of such treatment.

J. W. CUTLER, University of Pennsylvania Graduate School of Medicine, Philadelphia:

Pregnancy and Tuberculosis-Changing Concepts in Management: The exhibit describes (1) management and results in pregnancy and arrested tuberculosis (arrested without collapse therapy); (2) management and results of pregnancy and tuberculosis (arrested without collapse therapy); (3) management and results of pregnancy and active tuberculosis first recognized during pregnancy, with case histories of patients in whom collapse therapy and streptomycin were used to bring the tuberculosis under control without interruption of pregnancy after other measures failed; (4) control of tuberculosis in pregnancy through routine use of antepartum roentgenologic examination of the chest.

CATHARINE MACFARLANE and FLORENCE SLATER, Woman's Medical College of Pennsylvania, Philadelphia:

Control of Cancer of the Uterus—Value of Periodic Pelvic Examination, Report of a Ten Year Clinical Research: Statistical charts illustrate the pelvic observations in a group of 700 presumably well women followed over a period of ten years. These include cancerous, precancerous and noncancerous lesions. Moulages illustrate cancerous and precancerous lesions as seen through vaginal speculums. Technic of the probe test and biopsy is demonstrated on specimens.

WALTER W. WILLIAMS and FRED A. SIMMONS, Springfield Hospital and Massachusetts General Hospital, Springfield and Boston:

V 1
194

Male Infertility: The exhibit interprets spermatic pathology in terms of clinical fertility. The material was derived from the routine study of sterility cases in private practice. A vast number of apparently normal gametes are ordinarily required to furnish a single normal spermatozoon which is capable of fertilizing an ovum. The damage to a sperm population is commonly out of all proportion to the observed anomalies. Potential fertility is a variable which roughly coincides with the incidence of spermatic pathology. The clinical problem of diagnosis and prognosis hinges on the ability to recognize significant damage to the sperm population as a whole. Sperm concentration and motility and incidence and type of pathologic gametes are all important.

WILLIS E. BROWN, OTTO F. KRAUSHAAR and J. T. BRADBURY, State University of Iowa College of Medicine, Iowa City:

Cytology in the Detection of Cancer-Results of a Survey in 5,000 Women over 30 Years of Age: The exhibit shows photomicrographs of normal and cancerous cells in smears stained by the Papanicolaou technic. In addition to adenocarcinomas and epidermoid carcinomas of the cervix and uterus, examples of cancers of lung and kidney are included. The summary of a survey of about 5,000 vaginal smears is presented to show the correlation of cytological observations with those of biopsies and clinical examinations.

JOHN W. HUFFMAN, Northwestern University Medical School, Chicago:

The Paraurethral Ducts: Wax model reconstructions, photomicrographs, photographs and drawings illustrate the embryology, the detailed anatomy, the histology and pathology of the paraurethral (Skenes) ducts and glands in the human female.

L. I. DUBLIN and D. B. ARMSTRONG, Metropolitan Life Insurance Company, New York:

Progress in Maternal and Infant Welfare: An exhibit of charts describes recent changes in birth rates, maternal mortality and infant mortality: (1) trend of the birth rate in the United States since 1920, by age of mother and birth order of child; (2) reductions in maternal mortality at various ages; regional variations, urban and rural compared; increase in hospital confinements; major puerperal causes, time of death in maternity; (3) decrease in infant mortality; chief causes of deaths in the first month of life; infant mortality of the states compared.

Section on Ophthalmology

The section exhibit committee of the Section on Ophthalmology consists of Georgiana D. Theobald, Oak Park, Ill., chairman; Edwin B. Dunphy, Boston, and Phillips Thygeson, San Jose, Calif.

WILLIAM STONE JR. Massachusetts Eye and Ear Infirmary, Boston:

New Type Movable Implant: The exhibit presents a new type of movable implant which is a modification of several existing varieties. The results of a large series of implantations done at the time of enucleation and also a series done on sockets where the previous result has been unsatisfactory will be presented. No extrusions have occurred over a year's period and the motility on an over-all basis is 84 per cent of that of the normal eye. The results of a series of plastic repairs on contracted sockets utilizing the implant are shown, and the advantages and disadvantages of the procedure are depicted. The surgical technic necessary is diagrammed in detail. Results of animal studies on tissue growth into and around these implants over varying periods are shown.

RAYMOND G. INGALLS, Institute of Ophthalmology, Presbyterian Hospital, New York:

Tumors of the Orbit: The exhibit illustrates the important characteristics of twenty-seven types of orbital tumors. Photographs show patients with exophthalmos, increased density of soft tissue, osseous changes, biopsy material and photomicrographs of the cellular structures. The tumors are presented in the order of their frequency: hemangioma, pseudo tumor, lymphosarcoma, dermoid cysts, retinoblastoma, meningioma, melanoma, neurofibroma, cholesteatoma, rhabdomyosarcoma, neuroblastoma, hematoma, myoblastoma, fibroma, osteoma, neurinoma, sarcoma, lipoma, dermolipoma and glioma. Carcinoma of the orbit is illustrated by several cases. The number of cases, percentages of frequency, age of onset, sex, orbit and an analysis of age factors, are presented.

BERTHA A. KLIEN, Chicago:

Diseases of the Fundus Oculi: Exhibit of paintings and photomicrographs illustrate the clinical and histopathologic manifestations of diseases of the retina, choroid and optic nerve. Special emphasis is placed on the correlation of the clinical and anatomic data and on the discussion of points important in the differential diagnosis of clinical syndromes, which are of interest not only to the ophthalmologist but to other specialties.

LOUIS LEMPFELD, Wills Eye Hospital, Philadelphia:

Prevention of Ophthalmia Neonatorum—Antibiotics Replace Silver Nitrate: The exhibit presents statistical data proving that use of silver nitrate is made obsolete by availability of new antibiotics. Every case of gonorrheal ophthalmia was cured with penicillin. Penicillin was instilled in place of silver. Silver is not a safe gonococcicide in the eye. Treatment of infected expectant mother eliminates ophthalmia.

JOHN G. BELLOWS and CHESTER J. FARMER, Northwestern University Medical School, Chicago:

Treatment of Ocular Infections—Use of Chemotherapeutic Agents: Exhibit shows the distribution of sulfonamide compounds, penicillin and streptomycin between the blood and ocular fluids and tissues. A series of experimental extraocular and intraocular infections induced in rabbits' eyes by various organisms is shown by means of transparencies, together with clinical cases. The therapeutic agents employed in this study include the sulfonamide drugs, penicillin, streptomycin, gramicidin, tyrothricin and bacitracin. The sites of the commoner types of infection are shown diagrammatically, with the drug of choice. The procedure for obtaining corneal and conjunctival scrapings with the isolation and means of determining the sensitivity of the organism is shown. Methods of treatment including corneal baths, with and without ion transfer and intraocular injections, are illustrated.

LORAND V. JOHNSON, Western Reserve University School of Medicine, Cleveland:

Ocular Toxoplasmosis—Clinical Observations: The exhibit presents drawings of choroiditis, roentgenograms of cerebral calcification and data relat-

ing to danger to mother from additional pregnancies, but freedom from infection for additional babies. Congenitally infected babies do not appear later to transmit the infection to the third generation.

ADOLPH POSNER and ABRAHAM SCHLOSSMAN, New York:

Observations on the Course of Glaucoma: A statistical analysis is made of 474 cases of glaucoma, including 373 cases of primary glaucoma, with regard to age, sex and refractive errors of the patients. This material is compared with similar studies in the literature. Certain conclusions which have been drawn from this study are given in graphic form. Case histories are presented to compare mild glaucoma with malignant glaucoma. These two extremes in the scale of severity differ sufficiently from the typical picture to be worthy of special consideration.

Section on Laryngology, Otology and Rhinology

The representative to the Scientific Exhibit from the Section on Laryngology, Otology and Rhinology is James B. Costen, St. Louis.

J. BROWN FARRIOR, Tampa, Fla., and RICHARD C. BOYER, Ochsner Clinic, Tulane Medical School, New Orleans:

The Ear in Roentgen Anatomy: The exhibit consists of a series of temporal bones which have been sectioned and mounted in plastic to permit the visualization of the internal landmarks of the ear. Roentgenograms of the individual sections demonstrate the appearance of the anatomic divisions of the temporal bone as they appear on clinical roentgenograms. Sections are prepared for each of the classic roentgenologic views of the temporal bone.

CHEVALIER L. JACKSON, JOHN V. BLADY, CHARLES M. NORRIS and WALTER MALONEY, Temple University School of Medicine, Philadelphia:

Cancer of the Larynx: The exhibit presents an analysis of five year end results in a series of several hundred patients treated by surgery or irradiation, or both, from 1930 to 1942. Operative specimens and correlated clinical and pathologic data are so arranged that the criteria on which selection of treatment was based can be rechecked and reevaluated in the light of the subsequent course. A similar study of patients treated by irradiation alone and of patients in whom recurrence or metastasis was treated is also presented. A concise summary of the exhibitors' latest views on criteria for the selection of treatment are given.

JOSEPH I. KEMLER, Baltimore:

Bilateral Thyrotomy for Carcinoma of the Larynx: The exhibit shows drawing of carcinomas of the larynx suitable for the operation, photomicrographs of specimens and plates of the different steps of the operation, with models of some of them. A drawing of the larynx after operation is presented.

A. C. STUTSMAN, Washington University School of Medicine, St. Louis:

Foreign Bodies of the Tracheal Bronchial Tree and Esophagus: The exhibit of roentgenograms shows the various changes produced by nonopaque bodies in the tracheal bronchial tree. Foreign bodies of the upper portion of the esophagus are presented.

ADA M. HILL, American Hearing Society, Washington, D. C.:

Hearing Conservation: The exhibit consists of dioramas depicting progress in the work for persons with impaired hearing. Information is available on lip reading, hearing aids, prevention of deafness, and national and local programs for rehabilitation of the hard of hearing.

MILTON G. LEVINE, ROBERT E. HOYT and O. B. PRATT, College of Medical Evangelists, Los Angeles:

Rhinoscleroma—Etiology, Pathology and Diagnosis: The exhibit describes experimental studies carried out during the past two years in the Institute of Experimental Medicine. The etiology, pathology and diagnosis are presented.

GUERDAN HARDY, St. Louis:

Fractures of the Zygomatic (Malar) Bone—Diagnosis and Treatment: The exhibit includes charts showing causes of malar fractures, the diagnosis and associated injuries; photographs and roentgenograms of patients, and drawings showing proper approaches in both simple depression and comminuted fractures.

Section on Pediatrics

The representative to the Scientific Exhibit from the Section on Pediatrics is Albert V. Stoesser, Minneapolis.

CARLETON DEAN, Michigan Crippled Children Commission, Lansing, Mich.:

Prosthetic Training for Child Amputees in Michigan: The exhibit presents the physical and mental preparation and prosthetic instruction program developed by the Michigan Crippled Children Commission. Features include a prosthetic instructor who is a double arm amputee and several child amputees ranging in age from 5 to 14 years. Training in the use of the prosthesis for common, everyday activities will be exemplified by the use, on the part of the live models, of various equipment such as training steps, roller skates, tricycles, eating and writing equipment.

LAWRENCE J. LINCK, National Society for Crippled Children and Adults, Chicago:

Services to the Handicapped - Cerebral Palsy: The exhibit includes pictures and transparencies with descriptions illustrating health, welfare, education, recreation, rehabilitation and employment services for crippled and handicapped persons; special emphasis is placed on services for children with cerebral palsy, such as, physical, occupational and speech and hearing therapy.

H.M. KEITH, W.McK. CRAIG, J.W. KERNOHAN, F.P. MOERSCH and J.D. CAMP, Mayo Clinic, Rochester, Minn.:

Brain Tumors in Children: The exhibit presents a statistical analysis of brain tumors in children observed between the years 1907 to 1946 inclusive. In all the cases reported (over 400) the children had tumors which were proved by clinical means and by a microscopic examination of tissue removed at operation or at necropsy. These tumors are classified as to location and type, and as to the age of the patient. Case histories representing the various types of tumor observed, accompanied by roentgenograms and by gross and histologic photographs in color, are shown.

ALFRED D. BIGGS, St. Luke's Hospital, Chicago:

Primary Tuberculosis - A Clinical and Roentgen-Ray Study: The exhibit includes studies of the evolution and healing of typical primary lesions, as well as clinical features of primary tuberculosis including gastric washings and sedimentation rates.

ARILD E. HANSEN and HILDA F. WIESE, University of Texas School of Medicine, Galveston:

Dietary Fat in Relation to the Skin: One of the significant noncaloric functions of fat is its effectiveness in the maintenance of a healthy skin. Exclusion of fat containing linoleic or arachidonic acid from the diet results in typical syndromes characterized by abnormalities of the skin in both rats and young puppies. Analyses of the serum lipids and lipids of the skin show definite qualitative differences as compared with those of animals maintained on diets containing fats rich in the essential fatty acids. Possible relationship between dietary fat containing linoleic or arachidonic acid and the dermal structure of man has been demonstrated. The serum fatty acids of approximately three fourths of the infants and children and about one half of the adults with eczema show a low degree of unsaturation. Addition of fat of animal origin, such as fresh lard, and of certain vegetable oils rich in the essential fatty acids to the diet of some 200 patients disclosed favorable clinical response in the majority of infants and children.

HARRY WALLERSTEIN and ALFRED SCHWARZ, Jewish Memorial Hospital, New York:

Management of Erythroblastosis Fetalis - Substitution Transfusion; Indications and Technics: Enlargements of transparencies depict basic pathology believed responsible for failure of former methods of therapy. Charts show former routines and resultant mortality rates compared with present series. Criteria for anticipation and diagnosis and indications for blood substitution and other forms of treatment are given with significant case histories. Methods of blood substitution (including sagittal sinus, radial artery and umbilical vein technics) are described and illustrated by enlargements of transparencies and by manikin demonstration.

VIRGINIA SHULER, Committee on Rural Medical Service, American Medical Association, Chicago:

Rural Child Health: The exhibit shows the progress of the Hill-Burton program, revealing that of the hospital projects approved for construction a majority are located in communities with fewer than 5,000 population; programs fostered by state medical societies to extend the best of medical care to children who live in rural areas; how the health program of the Parent-Teachers Association coordinates with that of the medical societies, and how a medical school reaches out to the rural physician and offers him the advantages of urban practice.

JOHN P. HUBBARD, American Academy of Pediatrics, Chicago and Washington, D.C.:

Study of Child Health Services: Preliminary results of the two and one-half year nationwide study of child health services are described. The amount of child care by hospitals, community health agencies and physicians; the distribution of these services in relation to child population and according to the metropolitan and isolated character of the counties; variations between states, and comparisons between the services for children provided by general practitioners and pediatricians are shown. The extent of the general practitioners' and the pediatricians' hospital training in pediatrics is given special emphasis. Charts based on visits and questionnaires to medical schools, with particular reference to pediatric education, include comparisons in budgets and variations in teaching hours. A diagram shows the implementation program at the national level and its integration with state programs.

Section on Experimental Medicine and Therapeutics.

The representative to the Scientific Exhibit from the Section on Experimental Medicine and Therapeutics is Robert W. Wilkins, Boston.

IRVING S. WRIGHT, CHARLES D. MARPLE and DOROTHY F. BECK, Committee for the Evaluation of Anticoagulants in the Treatment of Coronary Occlusion with Myocardial Infarction, American Heart Association, New York:

Anticoagulants in the Treatment of Coronary Occlusion with Myocardial Infarction: The exhibit presents the experience of the Committee in over 800 cases of coronary occlusion, approximately one half treated with anticoagulants. It includes the plan under which the study was accomplished; the mortality and morbidity among patients treated with anticoagulants as compared with patients treated by conventional methods alone; the incidence of hemorrhagic complications of anticoagulant therapy with the causes for and treatment of such complications; the usual incidence of thromboembolic complications of cardiovascular disease and the effect of anticoagulant therapy on this incidence and technics in the use of "dicumarol" and heparin.

SAMUEL M. FEINBERG, THEODORE B. BERNSTEIN, JACK M. ROSE, ALAN R. FEINBERG and SIDNEY FRIEDLAENDER, Northwestern University Medical School, Chicago:

Antihistaminic Drugs: The exhibit depicts the role of the antihistaminic drugs and shows the various mechanisms by which histamine may be combated and the mechanism of the antihistaminic drugs. The experimental actions of these drugs are illustrated, and the clinical indications, uses, incidence of results, toxic actions and limitations are described. Colored drawings of series of skin tests on backs of human subjects illustrate a new technic for assay of these drugs. Placards show the structural formulas and chemical names of new and old drugs tried by the authors experimentally and clinically.

SAMUEL J. PRIGAL, New York Medical College, Flower and Fifth Avenue Hospitals, New York:

Studies with Steam-Generated Aerosols: The exhibit describes the apparatus, a combined steam-generator and aerosolizer which is capable of producing aerosols of a variety of solutions such as aminophylline, ammonium chloride, epinephrine, "benadryl," penicillin, streptomycin and sulfonamide drugs. Several methods of confining and conserving the aerosol by means of a tent, breathing box and a closed chamber are shown. Blood levels of penicillin and streptomycin obtained by inhalation of aerosols are recorded. The clinical evaluation of the use of aminophylline aerosol in the treatment of asthma and aerosol penicillin in the treatment of infections in the respiratory tract is presented. The prophylactic application of aerosol penicillin in respiratory diseases is emphasized.

DAVID LEHR, New York Medical College, Flower and Fifth Avenue Hospitals, New York:

Low Toxicity of Sulfonamide Combinations-Experimental and Clinical Studies: Several sulfonamide drugs, such as sulfathiazole, sulfadiazine, sulfamerazine and sulfamezathine, can be dissolved simultaneously in the same medium to the full extent of their separate saturation levels without the occurrence of precipitation. Consequently, combinations of partial dosages of two or more

sulfonamide compounds, if compared with equal total amounts of single drugs, showed substantially less tendency to intratubular deposition of crystals and thus to the development of renal obstruction. This fact accounted for the strikingly low acute and chronic toxicity of sulfonamide combinations in experimental animals. In addition, combinations were more completely absorbed and excreted than any of their individual constituents at the same total dosage. These results were confirmed in absorption-excretion studies in human beings using combinations of equal partial amounts of sulfadiazine-sulfathiazole-sulfamerazine, sulfadiazine-sulfathiazole, and sulfadiazine-sulfamerazine. Therapeutic results were uniformly satisfactory and conspicuous in many instances by the speed of clinical improvement.

SIBLEY W. HOOBLER and GORDON K. MOE, University of Michigan Medical School, Ann Arbor, and RICHARD H. LYONS, Syracuse University Medical School, Syracuse, N.Y.:

Autonomic Blockade with Tetraethylammonium - Pharmacologic Studies with Specific References to its Diagnostic and Therapeutic Use in Peripheral Vascular Diseases: Tetraethylammonium compounds temporarily block transmission of nerve impulses at the autonomic ganglions. The drug is therefore indicated as a diagnostic or therapeutic agent where sympathectomy may be of benefit. Skin temperature and plethysmographic records showing alterations in peripheral blood flow following administration of the drug to normal subjects and to patients with various peripheral vascular disease states are presented and compared to the effects of alterations of vasomotor tone by means of such procedures as reflex vasodilatation from body heating, paravertebral sympathetic block and sympathectomy. Pharmacologic studies of the drug in animals and its effects on the human gastrointestinal tract in hypertension and in other conditions are illustrated.

ALVAN L. BARACH, GEORGE FOSTER HERRON, JAMES H. CULLEN and CHESMORE EASTLAKE JR., Columbia-Presbyterian Medical Center, New York and The House of Rest, Yonkers, N.Y.:

Bilateral Lung Rest in the Treatment of Pulmonary Tuberculosis-Principles and Technic of the Use of the Immobilizing Lung Chamber: The exhibit explains the principle of bilateral lung rest and illustrates how equal pressures are maintained on the outer and inner surfaces of the chest wall. The passage of air in and out of the immobilized lungs is shown to be the result of a variation in the density of air in the chamber produced twenty-five times a minute. The clinical results in 20 patients are reported, illustrated by roentgenograms of the lungs before and after treatment and follow-up films for one to ten years. Data on 15 of 21 patients who obtained arrest of their disease with closure of cavity and negative sputums are presented. The method of operation of the chamber is described.

A. J. CARLSON and A. C. IVY, National Society for Medical Research, Chicago:

Animal Experimentation and Medical Progress: The exhibit consists of material illustrating anti-vivisection propaganda and literature and other educational aids provided by the National Society for Medical Research suitable for educating the public on the necessity, benefits and humane character of animal experimentation.

WILLIAM P. CHAPMAN, ROBERT B. LIVINGSTON, MILTON GREENBLATT and HARRY C. SOLOMON, Boston Psychopathic Hospital, Harvard Medical School, Boston:

Physiologic Studies of Frontal Lobe in Man: (1) Effects of Electrical Stimulation of Orbital Surface; (2) Effects of Lobotomy: Cessation of respiration and elevation of blood pressure were obtained independently or simultaneously by electrical stimulation of the orbital surface of the frontal lobe in 7 of 9 patients. Results of stimulating the tip of both temporal lobes are also shown. A decreased tolerance to discomfort was obtained after lobotomy. Postoperative changes in the electroencephalogram, epinephrine response and in dextrose tolerance curves are shown.

J. Q. GRIFFITH JR., University of Pennsylvania, and J. F. COUCH, U. S. Department of Agriculture, Philadelphia:

Pharmacology and Clinical Use of Rutin: Many investigators have contributed to this exhibit, which has been arranged by Griffith and Couch. The exhibit describes (1) animal experimental studies showing the effect of rutin on capillary permeability and fragility under various experimental conditions; (2) the effect of rutin in the following clinical conditions: (*a*) patients with hypertension and associated capillary fault, to lessen incidence of apoplexy, (*b*) retinal hemorrhage, (*c*) purpura, (*d*) hereditary telangiectasia, (*e*) idiopathic hemoptysis, (*f*) certain cases of nephrosis, (*g*) as an adjuvant to physostigmine in treatment of glaucoma and (*h*) prophylaxis against radiation injury.

ALBERT E. SIDWELL JR. and WALTER WOLMAN, Chemical Laboratory, American Medical Association, and EARL C. PFEIFFER, University of Illinois College of Medicine, Chicago:

Chemical Structure and Pharmacologic Action: The exhibit shows the effect of substitution of chemical groups in pharmacologically active substances. The relation of the spatial differences between atomic groupings and the pharmacologic activities of the compounds are indicated. Models and drawings emphasize the distance between groups and the effect of substituents on the potency of drugs.

Section on Pathology and Physiology

The representative to the Scientific Exhibit from the Section on Pathology and Physiology is Frank W. Konzelmann, Atlantic City, N. J.

KARL A. MEYER, DONALD D. KOZOLL, WILLIAM S. HOFFMAN, FREDERICK STEIGMANN and HANS POPPER, Hektoen Institute for Medical Research of Cook County Hospital, Chicago:

Amino Acids in Clinical Medicine: The value of specially processed proteins and amino acid preparations in the treatment of conditions accompanied by protein deficiencies is demonstrated by the results obtained from both clinical observations and laboratory studies. The role of specific amino acids in enhancing the biologic value of natural protein and in combating deficiencies is explained. The etiologic and pathogenetic mechanism of protein deficiency in various surgical and medical diseases is discussed, as are the therapeutic indications of amino acids. The exhibit describes methods for the biologic evaluation of protein preparations in animal and human subjects and deals with the principles involved in the practical application of amino acid therapy.

V 1
194

MELVIN H. KNISELY, EDWARD H. BLOCH, THEODORE S. ELIOT and LOUISE WARNER, University of Tennessee College of Medicine, Memphis, and University of Chicago School of Medicine, Chicago, and FRITZ GORO, *Life Magazine*, New York:

Sludged Blood: A series of colored 8 by 10 inch (20 by 25 cm.) transparencies of microscopic living circulation show some aspects of normal circulation and various kinds of circulatory damage done by sludged blood.

L. W. KINSELL, G. D. MICHAELS, SHELDON MARGEN, H. A. HARPER, W. E. LARSEN, D. P. McCALLIE and E. F. EVANS, University of California Medical School, San Francisco and U. S. Naval Hospital, Oakland, Calif.:

Protein Metabolism in Disease of the Liver: The liver is essential for normal anabolism and catabolism of dietary and endogenous protein. Data are presented to illustrate (1) that lipotropic agents improve the utilization of administered protein in patients with chronic hepatic damage, (2) that the utilization of intravenously administered methionine is impaired in patients with acute and chronic damage to the liver, (3) that there is evidence of an excessive catabolism of sulfur-containing amino acids in some persons with severe hepatic damage and (4) that this excessive catabolism can be corrected by the administration of certain protein anabolic steroids. From the preceding and related observations, one is enabled to arrive at certain conclusions and impressions concerning the mechanism and treatment of patients with chronic hepatic damage. The work here presented has been performed under a contract with the Office of Naval Research.

BERNARD M. CHAPMAN and ISADORE PILOT, Edgewater Hospital, Chicago:

Cancer Diagnosis in Small Community Hospital: The exhibit shows the simple scientific methods in cancer diagnosis available in the general practitioner's office that can be coordinated with the facilities of a small community hospital. The technic of preparing slides of exfoliate cells from various body secretions for Papanicolaou smear diagnosis is described. The method, advantages and limitations of aspiration biopsy and the correct procedures of formal biopsy are illustrated. Case histories using these diagnostic procedures are shown with transparencies to illustrate the pathologic conditions.

JULIUS S. WEINGART, Iowa Lutheran Hospital, Des Moines, Iowa:

Stereoscopic Photography of Pathologic Specimens: The exhibit shows stereoscopic photographs, most of them in color, illustrating many phases of morbid anatomy. This is offered as an extremely effective method for preserving the actual appearance of specimens with all their anatomic relations. The apparatus and technic involved will be demonstrated.

LALL G. MONTGOMERY, American Society of Clinical Pathologists, Muncie, Ind.:

Registry of Medical Technologists: The exhibit describes the work of the Registry of Medical Technologists, its objects and aims, requirements for certification and growth of the registry; charts show the distribution of registrants, both geographic and as to places of employment, and illustrate salary studies of registrants' records.

J. GARROTT ALLEN, MARGARET SANDERSON, WILLADENE EGNER, CHARLES McKEEN, RICHARD ELGHAMMER, JAMES CROSBIE and BURT GROSSMAN, University of Chicago, School of Medicine, and Argonne National Laboratory, Chicago:

Hemorrhagic Disease Caused by Heparinemia—Temporary Control by Toluidine Blue or Protamine Sulfate: The exhibit shows control of certain hemorrhagic diseases by toluidine blue or protamine sulfate. Such diseases are caused in part at least by a circulating anticoagulant similar to heparin. These include the hemorrhagic syndrome following ionizing irradiation and nitrogen mustard therapy; that associated with acute and subacute leukemic states, experimental anaphylactic shock and to some extent in Werlhoff's disease, aplastic and pernicious anemias. Temporary control of bleeding in most of these states may be obtained by the intravenous administration of toluidine blue or protamine sulfate. Both of these are antiheparin substances. They do not affect the hemorrhagic states caused by reduced prothrombin activity, hemophilia or afibrinogenemia.

CARROLL L. BIRCH, LOUIS R. LINARZI, RAYMOND S. KIBLER, J.T. PAUL, R.M. JONES AND P.L. BEDINGER, University of Illinois College of Medicine, Chicago:

Multiple Myeloma: History, symptoms and treatment of multiple myeloma are shown, with transparencies of myeloma cells in blood and bone marrow. Theories of origin of myeloma cells are illustrated. Roentgenograms show changes in bone. Specially stained cells demonstrate the chemistry of the disease.

JOHN A. WAGNER and GEORGE W. SMITH, University of Maryland School of Medicine, Baltimore:

Pathology of Intracranial Hemorrhage: A series of mounted gross specimens is presented, covering many of the disease processes accompanied by intracranial hemorrhage. These are divided into their principal groups (traumatic, vascular, metabolic, circulatory and neoplastic), each group of specimens being accompanied by charts, graphs and clinical abstracts for purposes of correlation. Working models of a type comparable to a skull and its contents are used to illustrate the dynamics of subdural and epidural hemorrhages. A section is devoted to the bedside diagnosis of minimal subarachnoid hemorrhage.

Section on Dermatology and Syphilology

The representative to the Scientific Exhibit from the Section on Dermatology and Syphilology is Francis W. Lynch, St. Paul.

REUBEN L. KAHN, BETTY J. BARIBEAU and FELIX A. REISS, University of Michigan Hospital, Ann Arbor:

Universal Serologic Reactions with Lipid Antigen: Several universal serologic reactions are shown: (1) results of a special serologic technic (different from diagnostic reactions in syphilis based on restricted technic); (2) reactions shown by all normal human beings tested, with different serologic patterns within a given range; (3) reactions shown by all animals tested, with different serologic patterns in different species; (4) reactions distinctive in syphilis and in lepromatous leprosy; (5) reactions under investigation (with technical variations) in other diseases.

ANNE L. BOHNING, HENRY EISENBERG, BELLE KORMAN, LYDIA MARSHAK, HERMAN N. BUNDESEN and THEODORE J. BAUER, Municipal Social Hygiene Clinic, Chicago Health Department, Chicago:

Studies in Cardiac Syphilis - Case Reports with Electrocardiographic, Roentgenographic and Clinical Observations: Electrocardiograms, roentgenograms and clinical observations are shown in cases of uncomplicated syphilitic aortitis, various types of aneurysms, involvement of the aortic valve, syphilitic heart disease associated with other types of heart disease and cases of cardiac syphilis in which there has been intensive treatment for syphilis with electrocardiographic, roentgenographic and clinical studies before treatment and one year or more after treatment. Statistics obtained from studies on 783 cases of proved syphilis show distribution of types of syphilitic heart disease according to age and sex, types of electrocardiographic tracings in 373 cases of syphilitic heart disease and percentages of cases in which syphilitic heart disease is associated with other types of heart disease.

J.R. HELLER Jr., Venereal Disease Division, U.S. Public Health Service, Washington, D.C.:

Treatment of Early Syphilis, Prenatal Syphilis and Neurosyphilis: Current penicillin therapy schedules, including outpatient treatment, are illustrated, with guides showing types of serologic response after the treatment of early syphilis with penicillin and their probable clinical implications. The panel on neurosyphilis shows the response of the spinal fluid after penicillin therapy and compares this with the response after malaria or hyperthermia treatment. Reprints and booklets of interest to physicians are available.

HELEN OLLENDORFF CURTH, Columbia University College of Physicians and Surgeons, New York:

Cancer and Acanthosis Nigricans: Acanthosis nigricans, a benign cutaneous disease, is associated with an internal cancer in 50 per cent of cases. So-called malignant and benign acanthosis nigricans are clinically and histologically identical. Cancer associated with acanthosis nigricans is highly malignant. In malignant acanthosis nigricans some properties of the tumor may activate the cutaneous lesions, while in benign acanthosis nigricans one of the sex hormones may do the same. Acanthosis nigricans associated with cancer has also been observed in dogs. The relationship between acanthosis nigricans and cancer is close and definite. It may be genetic.

J. WALTER WILSON, University of Southern California, and ORDA A. PLUNKETT, University of California at Los Angeles, Los Angeles:

Practical Medical Mycology - Culture and Identification of Fungi as an Office Procedure: Medical mycology has attained but a small fraction of that degree of popularity which is necessary for diagnostic accuracy. One of the principal reasons is that the laboratory methods which are employed remain so antiquated, cumbersome, time-consuming, laborious, dirty and malodorous as to cause the entire process to be considered an unpleasant chore by the majority of physicians. This exhibit demonstrates several innovations by which most of these objectionable features may be eliminated. Preserved culture specimens of one hundred and thirty species of fungi representing the eighty-five genera which are believed to be of interest to practitioners of medicine are presented, including all important pathogenic fungi and those contaminants commonly encountered. Mounted immediately above each specimen is an illustration of the microscopic features which serve to identify the species or genus. Space is provided for two hundred growing specimens in process of diagnosis. Two hundred permanently preserved mounts for microscopic study of all pertinent fungi are included, as well as histopathologic preparations of mycologic value. Forty-two color transparencies serve to illustrate the simplified laboratory technics. One hundred and twelve transparencies of line drawings serve to show simplified methods of identification.

CARL T. NELSON, Columbia University College of Physicians and Surgeons, New York:

The Kveim Reaction in Sarcoidosis: The exhibit shows the method of preparation of the Kveim antigen and describes the gross and histologic appearance of the so-called Kveim reaction in cases of sarcoidosis. Data are given on the specificity, sensitivity and clinical value of the reaction in this disease.

MAURICE T. FLIEGELMAN and CHARLES F. WILKINSON Jr., University of Michigan, Ann Arbor; EUGENE A. HAND, Saginaw, Mich., and STURE A. M. JOHNSON, University of Wisconsin, Madison:

Mendelian Dominant Skin Diseases - the Inheritance of Xanthoma Tuberosum Multiplex; the Inheritance of the Ehler-Danlos Syndrome: The mendelian, non-sex-linked mode of inheritance as well as the clinical characteristics are illustrated for two well known skin disease entities as represented by two large families, one with the Ehler-Danlos syndrome, the other with xanthoma tuberosum multiplex. Analysis of the genetic pattern makes it possible to predict the matings which will produce these conditions in the offspring.

WALTER C. LOBITZ Jr., Hitchcock Clinic; Dartmouth Medical School, Hanover, N.H.:

The Chemistry of Palmar Sweat: Sweat collected from a palmar sweat gland was studied in an attempt to obtain more information concerning the normal function of the individual sweat gland. The exhibit demonstrates how and why the sweat was collected from the openings of palmar sweat ducts and analyzed. The studies were carried out on normal persons when the blood concentrations of some of the substances were elevated. The values are presented for the chloride, urea, dextrose, uric acid, ammonia nitrogen and creatinine concentrations of palmar sweat.

GEORGE E. SNIDER and PHILIP H. LANDERS, Veterans Administration Hospital, Fort Howard, Md.:

Nitrogen Mustard in the Treatment of Boeck's Sarcoid: The exhibit is composed of chest roentgenograms, photographs, photomicrographs and charts showing the clinical progress of patients with Boeck's sarcoid treated with nitrogen mustard.

FREDERIC E. MOHS, University of Wisconsin Medical School, Madison.:

Chemosurgical Treatment of Cancer of the Skin - A Microscopically Controlled Method of Excision: The chemosurgical technic by which the microscopic control of excision is attained is illustrated by photographs of patients with lesions in various stages of treatment. Maps showing the location of the cancer tissue on successive days of treatment are exhibited along with the excised specimens and the corresponding frozen sections, which may be viewed under the microscope. Transparencies illustrate the various types of external neoplasms that are amenable to chemosurgical treatment. Pictures of the lesions before, during and after treatment are included. Reconstructions of cancers show the "silent" outgrowths from the main mass of tumor and emphasize the need for the microscopic control of excision. Charts present the rates of cure in the three year and five year periods.

V 1
194

GEORGE L. WALDBOTT, Detroit, and JOHN J. SHEA, Dayton, Ohio:

Contact Dermatitis of the Hands - Localization, a Means of Causative Diagnosis: Photographs demonstrate (1) contact lesions of the hands, (2) the respective causative objects in contact with the hands and (3) fingerprint ink designs of the patterns produced on the hands. The patterns of the lesions are classified according to the size and shape of the causative objects; this makes it possible to catalogue such agents and their patterns for diagnostic purposes. Photographs illustrate how the original patterns are modified by such factors as secondary contact sensitization (e.g., ointments), complicating atopic irritations (ingested food, inhaled substances and the like), secondary infection and previously existing cutaneous lesions.

EDWARD D. DeLAMATER and ROBERT R. KIERLAND, Mayo Clinic, Rochester, Minn.:

Blastomycosis - Blastomyces Dermatitides: The exhibit includes a consideration of the clinical features of blastomycosis, both cutaneous and systemic, its history, differential diagnosis and treatment. An exposition of the mycologic routine necessary to diagnose the disease (including direct tissue examination, histopathology, cultural characteristics and animal inoculation) is given. Experimental mycologic aspects of blastomyces including cytology, cultural variation and animal innoculation are presented.

Section on Nervous and Mental Diseases

The representative to the Scientific Exhibit from the Section on Nervous and Mental Diseases is A. B. Baker, Minneapolis.

ROBERT D. WOOLSEY, St. Louis University School of Medicine, St. Louis:

Differential Section of the Fifth Nerve for Trigeminal Neuralgia: Charts indicate symptoms and differential diagnosis, along with anatomic drawings of the fifth nerve and its connections; drawings of operative procedure are presented.

W. JAMES GARDNER and E. C. WEIFORD, Cleveland Clinic, Cleveland:

Closure of Defects of the Skull with Tantalum: The exhibit represents the experience with 106 cases of tantalum cranioplasty in civilian practice. The cases are divided into four groups. Transparencies and photographs illustrate the technic and the results in the various types of cases. Group 1 consists of the repair of old healed cranial defects; group 2, the repair of fresh operative cranial defects; group 3, the repair of recent contaminated traumatic defects, and group 4, the repair of defects in the presence of frank infection.

JOSEPH A. LUHAN, Loyola University School of Medicine and Cook County Hospital, Chicago:

Pathology of Nervous Disorders: Transparencies, photographs and photomicrographs of neuropathologic material routinely encountered in a large general hospital stress conditions of special interest to practitioners, particularly the appearances of the gross specimens in cerebral vascular accidents, brain trauma and infectious, degenerative and neoplastic diseases of the central nervous system. Typical microscopic appearances in some common disorders, particularly epidemic poliomyelitis, are shown.

FREDERIC A. GIBBS, Illinois Neuropsychiatric Institute, Chicago:

Electroencephalography as a General Hospital Service: Original records, diagrams and charts are presented to show the practical value of electroencephalography in neurology, psychiatry, neurosurgery, orthopedics, pediatrics, internal medicine, ophthalmology and otology. The exhibit shows how to set up an electroencephalographic service and gives recommendations for space allocation, staffing, selection of instrument, patient load, supplies, cost factors, installation and depreciation.

W. HORSLEY GANTT and WINTHROP M. PHELPS, Johns Hopkins Hospital, Baltimore, Md.:

The Conditional Reflex Function in Psychiatric and Neuromuscular Disorders: A method is described of measuring the rate of formation of new conditional reflexes, differentiation of stimuli, sensitivity to tactile perception and to pain, latent period, retention, character of muscular movements, stability and susceptibility to disturbances involving conflict. The results obtained are characteristic of certain neuroses, psychoses and muscular disorders. Furthermore, functional disturbances can be differentiated from the organogenic (e.g., brain tumor) and toxicogenic (e.g., endocrine or alcoholic).

GEORGE N. THOMPSON and J. M. NIELSEN, University of Southern California School of Medicine and Los Angeles County General Hospital, Los Angeles:

Area Essential to Consciousness-Cerebral Localization of Consciousness as Established by Neuropathologic Studies: Exhibit demonstrates the area essential to consciousness in the brain. The material has been obtained from 16 cases in which neuropathologic verification was obtained. These studies revealed that bilateral thalamic lesions result in impaired consciousness to a degree of lethargic stupor from which the patient can be partially aroused. Either bilateral thalamic lesions or hypothalamic lesions alone may produce this syndrome. Lesions of the junction of the hypothalamus and of the subthalamus with the mesencephalon result in deep coma from which no degree of recovery is possible. Both the stupor and coma are permanent and irreversible. It is concluded that the engram system essential to crude consciousness is located where the mesencephalon, subthalamus and hypothalamus meet.

Section on Preventive and Industrial Medicine and Public Health

The representative to the Scientific Exhibit from the Section on Preventive and Industrial Medicine and Public Health is Paul A. Davis, Akron, Ohio.

HERMAN E. HILLEBOE, FRANKLYN B. AMOS and GRANVILLE W. LARIMORE, New York State Department of Health, Albany:

Public Health as a Career: The exhibit portrays for the physician the splendid opportunities now offered by a career in public health. It presents typical examples of the activities of public health physicians together with information on positions now available and a brief description of the program of postgraduate fellowships for the training of public health physicians being provided by New York and other states.

W. W. BAUER, WILLIAM W. BOLTON, DEAN F. SMILEY and FRED V. HEIN, Bureau of Health Education,

American Medical Association, Chicago:

Medical Examinations of School Children: An exhibit illustrating the values of careful medical examination of school children and contrasting the pediatric type of examination with the hurried cursory inspection done in some schools. The role of the physician as a school medical adviser rather than a mere medical inspector is stressed.

ROBERT W. QUINN, Section of Preventive Medicine, Yale University School of Medicine, New Haven:

Rheumatic Heart Disease—A Study in Differential Prevalence in Rural and Urban Children in Connecticut: The exhibit shows the results of a statewide rheumatic heart disease survey of rural and urban Connecticut school children carried out in 1946, 1947 and 1948, along with some of the epidemiologic factors considered to be significant in rheumatic fever and rheumatic heart disease in Connecticut. The effect of crowding in the home on the rheumatic fever and rheumatic heart disease rates is shown.

AUSTIN SMITH and HAROLD D. KAUTZ, Council on Pharmacy and Chemistry, American Medical Association, Chicago:

Serums and Vaccines in Communicable Diseases: The exhibit covers the prophylactic and therapeutic application of serums and vaccines recognized in New and Nonofficial Remedies and the official compendiums. A simplified classification of serums and vaccines is shown, together with examples of various types of serums and vaccines, and illustrations of the disease manifestation or epidemiologic aspect of significance in the use of a particular agent. A pamphlet is available for distribution.

CHARLES WALTER CLARKE, American Social Hygiene Association, New York:

Serologic Tests for Syphilis in Industries—Exposition of Growth of Serologic Testing Among Industrial Workers: The exhibit deals with the growth of serologic tests for syphilis among industrial workers from 1929 to date and includes the results of three inquiries made by the American Social Hygiene Association regarding "blood testing in industry" in 1929, 1941 and 1947. The practices which should be followed in connection with blood testing in industry are set forth. Publications dealing with the subject will be presented for free distribution.

O. P. KIMBALL, Goiter Study Committee of the American Public Health Association, Cleveland:

Prevention of Endemic Goiter: The exhibit consists of wax models of different types and stages of thyroid changes. Distribution of endemic goiter in the United States, especially in Michigan, West Virginia and Ohio, before and after iodized salt prophylaxis is presented. Photographs describing clinical evidence and stages before and after treatment are shown.

J. S. BENGSTON, C. N. BRAMER, R. C. KLUSSENDORF and W. A. YOUNG, American Veterinary Medical Association, Chicago:

Rabies in Animals: The exhibit shows pictures of animals susceptible to rabies. There is a map showing distribution of rabies in 1946 and a table giving the incidence of rabies in recent years. One panel shows pictures of the procedure followed in making a diagnosis and outlines control measures that work.

ALBERT W. HILBERG, National Cancer Institute, U. S. Public Health Service, Bethesda, Md., and GEORGE N. PAPANICOLAOU, Cornell University Medical College, New York:

The Cytologic Test for Cancer: The exhibit shows photomicrographs of endocervical, vaginal, sputum and urine smears, both normal and atypical. There will be a demonstration with microscopes and slides of the smears to show how the cytologic tests are read.

J.G. TOWNSEND and H.T. CASTBERG, Industrial Hygiene Division, U.S. Public Health Service, Washington, D.C.:

Occupational Disease in Differential Diagnosis: The exhibit stresses the importance of taking an occupational history of every patient to discover possible hazardous exposures. Such information will assist in making the differential and the final diagnosis of an illness. Pathologic and physical observations are shown which may result from either occupational or nonoccupational diseases.

ESTELLA FORD WARNER, U.S. Public Health Service, States Relations Division, Washington:

Extension of Local Health Services: The exhibit consists of maps of the United States, indicating those areas of the country now covered by adequately staffed full time local health departments, the areas of the country now covered by full time local health departments and the organizational pattern suggested by the American Public Health Association completely to cover the United States with full time local health departments.

W.S. WHEELING and H.A. SLESINGER, Windber Hospital, Windber, Pa.:

Anthracosilicosis in the Bituminous Coal Miner: Transparencies of roentgenograms and electrocardiograms of anthracosilicosis are shown, together with charts of pertinent clinical and laboratory data.

REX H. WILSON, GLENN V. HOUGH and WILLIAM E. McCORMICK, Medical Division, B. F. Goodrich Company, Akron, Ohio:

Medical Problems Encountered in the Manufacture of American-Made Rubber: In toxicologic review of the components used in the manufacture of American-made rubber (synthetic rubber) special emphasis is placed on the proper methods of handling and the treatment of persons accidentally overexposed.

PAUL C. CAMPBELL JR., DONALD J. BIRMINGHAM and ROBERT A. SAMMONS, Industrial Hygiene Division, U. S. Public Health Service, Washington, D.C.:

Use and Abuse of the Patch Test: The exhibit presents clinical illustrations and academic facts pertinent to the basic principles of patch testing, the use of the patch test as a diagnostic procedure and conclusions regarding the correct interpretation of positive and negative reactions.

JAMES R. WILSON, Council on Foods and Nutrition, American Medical Association, Chicago:

Vitamin D Milk Program: This exhibit is designed to emphasize (1) the extent of the vitamin D milk program, (2) the degree to which the physician can rely on the vitamin D potency of fortified milk and (3) the desirability of checking the continued reliability of fortified products used

V 1
194

by means of biologic assays on "surprise" samples conducted or sponsored by health authorities.

WILLIS S. KNIGHTON, FRANKLIN M. FOOTE and VIRGINIA SMITH BOYCE, National Society for the Prevention of Blindness, New York:

Glaucoma Means Potential Blindness: Charts, posters and graphic devices illustrate signs and symptoms of glaucoma easily recognizable during a general physical checkup.

OREN C. DURHAM, Abbott Laboratories, North Chicago:

Hay Fever Pollen Hazards. Field Studies and Atmospheric Surveys in National Parks and Recreational Areas: A graphic presentation shows the degree of contamination of the air with hay fever pollens throughout the year or at least during the season of heavy patronage in most of the major National Park areas. Most of the Western parks have been found to be free or practically free from ragweeds and ragweed pollen. Other hazards than ragweed have, however, been given due consideration. A gallery of hay fever plants is shown together with the standard gravity slide technic of pollen counting as developed by the exhibitor and approved by the Aero-Allergen Council of the American Academy of Allergy.

ALFRED R. ROOS and JOHN C. ROOS, College of Medical Evangelists, Los Angeles:

Hay Fever Research in the Pacific Southwestern States - Visual Education in Allergy:

The exhibit includes paintings of typical species of allergic importance, charts showing pollination seasons of the different groups, charts showing plant counts in important species, maps showing the complicated distribution of various species, photographs showing abundance of various species close to thickly inhabited areas and specimens of typical plants. Basically the problem of hay fever and pollinosis in its broader aspects in this report is an accurate determination of the local flora. The long pollinating season, the varied geographic and climatic conditions and the unusual diversity and complexity of hay fever-producing plants contrast decidedly with the relative simplicity of the Eastern flora.

Section on Urology

The representative to the Scientific Exhibit from the Section on Urology is John H. Morrissey, New York.

FRED Z. HAVENS, Mayo Clinic, Rochester, Minn.:

Hypospadias-Surgical Correction: The exhibit shows models, photographs and drawings of (1) the various types and degrees of hypospadias and (2) the technic of the surgical treatment of this deformity by *(a)* the use of Edmunds' operation for correction of the chordee and *(b)* the use of the inlying tubular graft for reconstruction of the missing portion of the urethra. A statistical analysis of the results in 36 cases in which surgical treatment has been completed in the last five years is presented.

ALBERT E. GOLDSTEIN, Sinai Hospital and University of Maryland School of Medicine, Baltimore:

Studies in Polycystic Renal Disease: Drawings of the original operation including many specimens are displayed. Diagnosis is stressed particularly in the early cases in which the author believes that relief can be obtained. No absolute cures are possible, but prolongation of life is a factor. A new operative procedure is demonstrated. Pathology is discussed in detail.

ROGER W. BARNES and IVAN E. MARTIN, College of Medical Evangelists, Los Angeles:

Vesicovaginal Fistula: The exhibit shows the technic used for the repair of vesicovaginal fistula, using the inverted lithotomy position and fine catgut. The diagnosis and differential diagnosis and the etiology of vesicovaginal fistula are shown.

ARCHIBALD PERRIN HUDGINS, Charleston, W. Va.:

Perineal Dissection for Repair: The exhibit presents variations in technic in the perineal dissection. The advantages include ease and precision in anatomic dissection; blood loss is minimized and tissues are well exposed and identified for accurate approximation. This procedure is applicable when tissues are friable, and it is time-saving.

IRENE A. KOENEKE, V. E. CHESKY, G. A. WESTFALL, L. E. PECKENSCHNEIDER and THOMAS L. FOSTER, Hertzler Clinic, Halstead, Kan.:

Conservative Pelvic Surgery: Moulages show circulation of the female pelvis and maintenance of this circulation in conservative operations on the uterus and ovaries. The relation of genital and urinary problems is presented, based on the symptoms and observations in 1,000 cystocopic examinations on the female. The effect of castration and the accompanying psychiatric problems are depicted.

LAURENCE F. GREENE, Mayo Clinic, Rochester, Minn.:

Urinary Incontinence in Females Due to Ectopic Ureter: Urinary incontinence may occur in females as a result of ectopic ureters. In this condition the ureter, instead of entering the bladder, opens into the urethra or the vestibule of the vagina and a constant, uncontrollable escape of urine occurs. This distressing anomaly can be easily recognized and completely cured by proper surgical procedures. In addition to illustrative roentgenograms, the exhibit includes a transparent animated model which demonstrates the mechanics of the incontinence.

HARRY R. TRATTNER, St. Vincent Charity Hospital and Cleveland City Hospital, Western Reserve University, School of Medicine, Cleveland:

Improved Radiopacity in Intravenous Urography Prevention of Reactions from Contrast Medium: Comparative studies made from analysis of 1,000 intravenous urograms in normal and pathologic cases are shown. They include variations in density shadows cast by the contrast medium (only "diodrast" employed) in relation to alteration of reaction of urine. Urographic comparisons are as follows: (1) no attempt to change urinary reaction, for purpose of control; (2) administration of acid or alkali prior to urography; (3) urography following acidification and repeated in the same patient after alkalinization. Directions are given for intravenous tolerance test, classification, etiologic basis and method to prevent reactions to the contrast medium.

GEORGE F. CAHILL and M. M. MELICOW, Presbyterian Hospital, Columbia University, New York:

Somatosexual Aberrations in Infants and Children - Role of Adrenal Cortex: Somatosexual aberrations in infancy and childhood can cause doubt and sometimes error in determining sex. The exhibit includes case histories and photographs of genetic females erroneously brought up as males and vice versa. The steps necessary in determining the true sex are outlined and the role of the adrenal

cortex discussed. Cases fall into two main groups: (1) infants and children with somatosexual abnormalities without demonstrable adrenocortical enlargement, but with suggestive clinical and laboratory evidence, *(a)* in genetic females; *(b)* in genetic males; (2) infants and children with somatosexual abnormalities with demonstrable adrenocortical enlargement or tumor, as well as clinical and laboratory evidence, *(a)* in genetic females; *(b)* in genetic males.

Section on Orthopedic Surgery

The representative to the Scientific Exhibit from the Section on Orthopedic Surgery is Tom Outland, Elizabethtown, Pa.

HARRY B. MACEY, Scott and White Hospital, Temple, Texas:

Plastic Procedure for Lymphedema of the Extremities: Exhibit demonstrates plastic procedure for the treatment of disabling lymphedema of the upper and lower extremity, demonstrated by the use of moulages and photographs of patient both before and after surgical intervention.

VERNON L. HART and WESLEY H. BURNHAM, Minneapolis:

Congenital Displacement of the Hip Joint During Infancy—Early Recognition and Treatment: It is rare for physicians to treat congenital dislocation and congenital subluxation of the hip before the age of walking because of failure to recognize the malformation in infancy. These malformations present a common etiologic background and may be diagnosed by simple clinical signs. The chief of these are limitation of abduction, shortening of the thigh and the presence of asymmetric skin folds. The early recognition of congenital displacement of the hip permits treatment before secondary changes take place and insures the best possible functional and anatomic result from treatment.

NORMAN L. HIGINBOTHAM and BRADLEY L. COLEY, Memorial Hospital, New York:

Tumors of Bone—Indications for Conservative Surgery: Exhibit consists of charts and photographs of roentgenograms depicting several cases of bone tumors in which conservative measures were feasible in lieu of radical amputation. The indications for conservative measures are emphasized.

EMIL D. W. HAUSER, Chicago:

Cohesive Bandage for Treatment of Clubfoot in the Newborn: A procedure is described which enables the treatment of clubfoot immediately after birth. The technic consists in using cohesive bandage, which will adhere to itself but will not stick to the skin. This is reinforced with waterproof tape. Analysis is made of the various components of the deformity. The method for correcting each component is described, and the order in which they should be corrected is given.

H. G. HARDINGE, College of Medical Evangelists, Loma Linda, Calif.:

Self-Adjusting Hip Bolt and Nail Guide: The exhibit includes (1) a self-adjusting hip bolt which consists of an inner and an outer member so constructed that the proximal end of the outer member is expanded within the head of the femur and the distal end of the inner member is attached to the lateral shaft of the femur. Shortening of the bolt is permitted, but a locking device prevents lengthening. (2) A nail guide for hip nailing is attached to the lateral aspect of the subtrochanteric area. Two guide arms extend, one anterior to and the other lateral to the head and neck of the femur, thus affording three dimensional perspective for accurate nail placements.

EARL D. McBRIDE, University of Oklahoma School of Medicine, Oklahoma City:

Lumbosacral Fusion—Wedged Bone Block: A comparatively simple technic of fusing the lumbosacral joint is demonstrated. It consists of dovetailing a block of bone into a rectangular slot, accurately excavated across the articular facets. A buttress is formed by the lamina below and the facets above, in which to apply the principle of distraction by spreading the laminae into flexion. This is one of the important advantages of the procedure. It provides immediate stabilization following removal of the disk. It eliminates severe chipping of the bone tissues, which commonly results in the various methods of Hibbs or Albee modifications. A cadaver specimen is used for demonstration, together with roentgenograms of results. One hundred and twenty-five patients have been surgically treated by this method, and a report has been made on the roentgenologic results of fusion in 38 cases, one to two years after operation.

GARRETT PIPKIN, St. Joseph's Hospital, Kansas City, Mo.:

Indefinite Knee Symptoms Resembling Injured Cartilages: The exhibit illustrates the variations in anatomy of the suprapatellar pouch caused by the communication of the suprapatellar pouch with the knee joint. It is normal for a suprapatellar plica (fold) to occur in the synovia. This fold may become fibrosed, hyalinized or calcified and cause symptoms simulating closely a disturbance of the semilunar cartilage.

LAURENCE JONES, Cedars of Lebanon Hospital, Los Angeles:

Chronic Low Back Pain, Fatigue and Nerve Root Pains (Sciatica)—A Symptom Complex Caused by Foot Imbalance: Drawings illustrate the mechanism causing the symptom complex. The anatomic changes due to primary internal rotation of the foot causing secondary internal rotation of the leg, anterior pelvic tilt with spinal cord tension and root pains at various levels are shown. The varied symptoms are low back pain, fatigue and various types of neuralgias. A fixed and entirely different method of correction of foot posture reverses the preceding changes and brings relief of pain. A radiographic demonstration of the measured change in lumbosacral angle that accompanies changes in foot position is presented. Statistical tables from four different sources will demonstrate approximately 300 cases of chronic low back pain accompanied by different types of neuralgias and sciatica.

WILBERT McGAW, HAROLD E. SNEDDEN, J. MUCKLEY and MAURICE D. SACHS, Veterans Administration Hospital, Cleveland:

Pneumarthrography of the Knee-An Aid in the Diagnosis of Internal Derangements: The exhibit consists of numerous transparencies showing the technic of air insufflation, roentgenograms of normal knee joints, various types of medial and lateral meniscus tears, cysts, tumors and osteochondritis dissecans. Each roentgenogram is accompanied by a diagrammatic, anatomic sketch and a brief summary of the clinical, surgical and pathologic observations and the end results.

PAUL R. LIPSCOMB, A. M. McKELVIE, A. C. WALSH and J. D. BARGER, Mayo Clinic, Rochester, Minn.:

Alkaline Phosphatase after Transplant of Fresh and Frozen Bone and in Bone Disease: The technic of staining decalcified bone for the presence of alkaline phosphatase is briefly presented. By photo-

micrographs which show the presence of the enzyme, the regeneration of new bone in rabbits after autogenous transplants can be clearly followed. Likewise, the presence of alkaline phosphatase in a few bone tumors and orthopedic diseases is demonstrated. Half of the exhibit is devoted to a comparative study in the experimental animal of osteogenesis after the transplantation of frozen homogenous bone. This is demonstrated by roentgenograms and by microscopic sections stained to show the presence of alkaline phosphatase.

Section on Gastro-Enterology and Proctology

The representatives to the Scientific Exhibit from the Section on Gastro-Enterology and Proctology are Donovan C. Browne, New Orleans, and J. P. Nesselrod, Evanston, Ill.

DAVID ADLERSBERG and JOSEPH SCHEIN, Mount Sinai Hospital, New York:

Primary and Secondary Sprue-Clinical and Pathologic Studies: Clinical differentiation of the two types of sprue is possible on the basis of duration of symptoms, oral lesions, hematologic changes and response to therapy. Gastrointestinal findings and chemical analyses of blood, duodenal contents and feces are similar in both groups. The pathologic changes consist of hyaline band formation in the villi, trabeculation of the mesenteric nodes, deposition of pigment in the small intestine and varying degrees of pancreatic fibrosis in primary sprue; of amyloid involvement, abdominal lymphosarcomatosis and intestinal lipodystrophy in secondary sprue.

EDWARD LEVY and ANGELO SALA, New York City Cancer Institute, New York:

Anorectal Canal-Anatomic Basis for Examination and Diagnosis: Review of the formation of the anorectal canal provides a general scheme of its clinical architecture. Organization of the muscular components together with their nerve and blood supply gives a basis for anatomic physiology. The epithelial lining, with some gross and microscopic characteristics of malignant disease, is demonstrated. Methods for examination and diagnosis are discussed. A glossary of terms in general use is given. A nomenclature based on anatomic and physiologic grounds is offered as a standard.

HARRY L. SEGAL, JAMES S. WATSON JR., SYDNEY A. WEINBERG, University of Rochester School of Medicine and Dentistry, Rochester, N.Y.:

Gastroscopic Color Photography: The exhibit shows the development of photography of the inside of the stomach. Emphasis is placed on the results in color secured through the flexible gastroscope by means of an external camera and a special power and synchronization unit developed by the exhibitors. The color transparencies obtained in normal patients, as well as in patients with gastritis, gastric ulcer, carcinoma, etc., are displayed. The histories, roentgenograms and photographs of the patients are correlated.

CECIL O. PATTERSON and MILFORD O. ROUSE, Southwestern Medical College, Dallas, Texas:

Differential Diagnosis of Gastric Carcinoma: The exhibit emphasizes the high incidence of gastric neoplasm, stresses the need for earlier and more thorough diagnoses of stomach disorders and demonstrates the characteristic appearance of stomach lesions which are malignant, potentially malignant and benign. Original color drawings of gastroscopic views, photographs of tissue sections, roentgenograms and gross specimens are presented, with condensed case histories and charts.

ALBERT J. SULLIVAN, THOMAS E. McKELL and FREDERICK C. REHFELDT, Ochsner Clinic, New Orleans:

Etiology of Peptic Ulcer-A Psychosomatic Study: There are many etiologic factors involved in the production of peptic ulcer. This exhibit is concerned with the theory of multiple etiology, and a clarifying formula in terms of constitutional, personality, environmental, traumatic and "X" factors is presented. The major personality types and the precipitating emotional situations involved are discussed. Observations based on personality studies as well as medical surveys on 1,000 cases of peptic ulcer are summarized. From the data obtained from certain clinical groupings it is possible to make valid diagnostic and prognostic conclusions. Representative case histories will be available.

MALCOLM R. HILL, CARROL S. SMALL and LEE J. RICHARDS, College of Medical Evangelists, Loma Linda and Los Angeles:

A Study of the Development of Anal Ducts and Glands with Particular Reference to the Pathogenesis of Anorectal Disease: Exhibit consists of models and photomicrographs representing a study of the development of anal glands in forty-nine fetuses, ranging in size from 9.5 to 38 cm. Correlation is made with a previous study of various age groups together with clinical consideration as to histopathology of anorectal disease.

HAROLD R. ROSSMILLER, Cleveland Clinic, Cleveland:

Gastroscopic Examination: Demonstrations of the method, value and limitations of gastroscopic examination in the diagnosis of intragastric lesions are presented and a human model and case histories with roentgen and gastroscopic findings are included.

ELMER H. LOUGHLIN, SAMUEL H. SPITZ and RICHARD H. BENNETT, with the assistance of JEROME B. MARGOLIES, Long Island College of Medicine and Long Island College Hospital, Brooklyn:

Diagnosis of Helminth and Protozoal Infections of the Gastrointestinal Tract: Diagnostic technics considered from the aspects of practicability and comparative efficacy when employed in hospital as well as private practice, including a systematic approach in the diagnosis of these infections, are presented.

Section on Radiology

The representative to the Scientific Exhibit from the Section on Radiology is S. W. Donaldson, Ann Arbor, Mich.

J. GERSHON-COHEN and A. G. COOLEY, Philadelphia:

Facsimile Roentgenography: The exhibit consists of transmission and reception apparatus to demonstrate facsimile transmission of roentgenograms and the applications of this medium in solving the roentgenologic services for small community, small hospitals, ships at sea, outlying centers where radiologists are not available, etc.

BENJAMIN FELSON, University of Cincinnati, Cincinnati:

Significance of Appendical Calculi: The incidence of appendical calculi, their frequent association with acute appendicitis and the simplicity of their diagnosis by means of roentgen studies are demonstrated on charts and roentgenograms. The infrequency of appendical calculi in the normal

appendix and their frequency in acute appendicitis (obtained from roentgenographs of a large number of surgical and autopsy specimens) are stressed.

HEINZ S. WEENS, JAMES V. WARREN, DAVID F. JAMES and HERBERT M. OLNICK, Emory University School of Medicine, Atlanta, Ga:

Contrast Visualization of the Vascular System: The exhibit demonstrates recently developed methods of roentgen visualization of the vascular system in man. It includes (1) constrast visualization of the heart chambers, pulmonary artery and aorta in various important clinical conditions; (2) visualization of the superior and the inferior vena cava in normal and pathologic states with emphasis on venous obstruction and the pattern of collateral circulation, and (3) a simple method of contrast visualization of the vascular system of the kidneys (nephrography).

LEE A. HADLEY, Syracuse, N.Y.:

Intervertebral Foramen Studies: Dissections of normal and abnormal intervertebral foramina mounted in transparent plastic together with the roentgenogram and stained sections from the specimen are presented. Roentgenograms of patients show different types of foramen encroachment. (1) physiologic; (2) traumatic; (3) degeneration of intervertebral disk with *(a)* spur formation backward from the disk margin, *(b)* spur formation forward from the posterior articulation, *(c)* pedicles coming closer together, *(d)* subluxation with telescoping of the posterior articulation forward into the foramen and wedging forward of the underlying body and *(e)* hyperplasia of the posterior capsule or ligamentum flavum; (4) disk substance bulging backward into the foramen causing nerve root pressure. The symptoms of nerve root pressure have unfortunately come to be diagnosed as "herniation of the nucleus pulposus." This is usually sought in the spinal canal. Too often the area of real pressure is overlooked, being situated more laterally in the less accessible intervertebral foramen.

C. C. BIRKELO and W. L. BROSIUS, Herman Kiefer Hospital, Detroit, and Tuberculosis Control Division, U. S. Public Health Service, Washington, D.C.:

Pulmonary Diseases - Correlation of Roentgenologic and Pathologic Findings: The exhibit consists of reproductions of antemortem and postmortem roentgenograms illustrating changes in pulmonary disease, including changes in the arterial system. Sectioned gross specimen photographs of each case are shown and a brief case history reproduced.

Section on Anesthesiology

The representative to the Scientific Exhibit from the Section on Anesthesiology is Urban H. Eversole, Boston.

JOHN ADRIANI and JOHN P. HOWARD, Charity Hospital and Louisiana State University School of Medicine, New Orleans:

Some Common Errors in the Management of Spinal Anesthesia: The errors commonly made in inducing and managing spinal anesthesia which lead to avoidable accidents, failures, untoward reactions and death are shown by means of photographs, charts and graphs. Each error or breach of technic is shown together with the correct or accepted method and explanation of the fundamental principles which are violated.

RICHARD C. THOMPSON and WILLIAM B. NEFF, Stanford University School of Medicine, San Francisco:

Newer Analgesic Drugs in Anesthesiology: The exhibit presents an experimental and clinical comparison of morphine with meperidine and several new closely related analgesics for fortifying the pain-relieving and reflex-obtunding qualities of nitrous oxide and oxygen anesthesia; graphs and kymographic records are shown

ALBERT FAULCONER JR., Mayo Clinic, Rochester, Minn.:

An Acoustic Gas Analyzer for Research in Anesthesiology: An acoustic method for the continuous determination of the percentage of constituents in certain gas mixtures is described. The use of this instrument with certain other devices for measuring physiologic variables is discussed and examples of photographic records obtained in these studies are presented. The possibility of adapting this equipment to other types of study is discussed.

J. EUGENE RUBEN, PATRICIA-MARY KAMSLER and W. LYALL HOWELL JR., Philadelphia General Hospital, Philadelphia:

Prolonged Spinal Anesthesia for Surgical Reduction of Hip Fracture: The exhibit consists of charts, diagrams and illustrations describing the technic of unilateral spinal anesthesia as used in old, poor risk patients and the results obtained with it.

Section on General Practice of Medicine

The representative to the Scientific Exhibit from the Section on General Practice of Medicine is M. B. Casebolt, Kansas City, Mo.

HAROLD M. CAMP, JAMES H. HUTTON, CHARLES P. BLAIR, FRANCES C. ZIMMER and ANN FOX, Illinois State Medical Society, Chicago and Monmouth:

The Doctor and His Medical Society: The organization and work of the society are shown. Through the committees of the society, the physician improves his own medical knowledge and facilities and thus better serves his patients. At the same time, he strives to educate the public in health problems and to stimulate activities which will carry sound policies into effect. The exhibit is amplified by material from the Committee on History, including a collection of old record books, an original membership certificate issued in 1841, some of the original transactions of the House of Delegates, old medical books, physicians' ledgers and record books one hundred years old or more, and schedules from about 1860.

DON H. DUFFIE, Central Lake, Mich.:

Practical Office Colorimetry - A Neglected Principle: Visual measurement of light transmission (not color matching) is presented. Speed, simplicity, economy and precision in determination of hemoglobin, dye excretion, etc., and also in the reading of colorimetric tests in general are stressed. The instrument is demonstrated.

J. O. KELLEY, J. C. GRIFFITH, L. J. VAN HECKE, C. SHERRILL RIFE and R. A. FRISCH, Medical Society of Milwaukee County, Milwaukee:

A County Medical Society Attacks Cancer--Activities of the Cancer Committee of The Medical Society of Milwaukee County: The organization of the Cancer Committee of The Medical Society of Milwaukee County is shown and its relationships to the various organizations interested in cancer. Specific projects undertaken by this committee include over-all community cancer statistical studies, projects in association with the American Cancer

V 1
194

Society, the establishment of cancer symposiums (professional education program), development of a cancer detection center and the sponsorship of teaching and research.

E. FULLERTON COOK, United States Pharmacopoeial Convention, Philadelphia:

United States Pharmacopoeia: The exhibit presents the thirteen standardized preparations of digitalis official in the Pharmacopoeia today, and reviews the development of digitalis preparations from the first U.S.P. of 1820, when only the tincture and infusion were official.

C. H. HEACOCK and L. W. KIBLER, Postgraduate Committee, Tennessee State Medical Association, Memphis:

Postgraduate Medical Education--Cancer Education by Medical Extension Plan: A map of Tennessee shows the ten circuit districts for postgraduate instruction in cancer. Within the circuit districts are shown also the forty-nine teaching centers where the postgraduate instruction is given under the extension plan for physicians. Charts show the agencies sponsoring the program with financial contributions and a history of ten years of postgraduate extension medical teaching with the results tersely stated in a comparative study.

ALBERT LEVIN, Biological Photographic Association, Pittsburgh:

Photography of Patients: Photographs in black and white and color, contributed by members of the Biological Photographic Association, illustrate the requirements of clinical photography for publication, teaching and records. Technical details accompany each picture. Special emphasis is placed on close-up work, such as the photography of skin lesions, etc. Experienced clinical photographers will answer questions about the materials, apparatus and methods used in the various fields of medical photography.

WILLIAM P. BOGER and J. Wm. CROSSON, Philadelphia General Hospital, Philadelphia:

Caronamide--Application to Enhancement of Penicillin Therapy: Caronamide orally administered results in the enhancement of penicillin plasma concentration by two to seven fold. The mode of action of this drug is presented schematically. The caronamide plasma concentrations resulting from various doses of the drug administered orally and parenterally are presented and also correlation of these concentrations and their effect on penicillin plasma concentrations. The effect of caronamide on penicillin plasma concentrations following the administration of both the usual and massive doses of the antibiotic is demonstrated. Dosage schedules of caronamide, practical clinical applications, untoward effects and influence of caronamide on other compounds are outlined.

ROBERT P. FISCHELIS, American Pharmaceutical Association, Washington, D. C.:

Pharmacy's Service to Medicine: The exhibit depicts various services of pharmacy to the practice of medicine as well as illustrations of the service of the laboratory of the American Pharmaceutical Association to standardization of drugs. It includes illustrations of drug standards found in the National Formulary, published by the Association, and data on the revision procedure and shows the work of the Division of Hospital Pharmacy, the Division of Prescription Practice and the Division of Publications of the American Pharmaceutical Association as they relate to the direct services provided for the practitioner of medicine.

MISCELLANEOUS EXHIBITS

Exhibits on various miscellaneous subjects are shown under this heading. They include a group of exhibits on diabetes, cancer, poliomyelitis and atomic energy.

WILLIAM T. DORAN, Department of Medicine and Surgery, Veterans Administration, Washington, D.C.:

The Medical Education Program of the Veterans Administration: The exhibit presents the structure and operation of the Veterans Administration medical education program separated into its chief component parts and showing the relation of each part to the others.

G. FOARD McGINNES, American National Red Cross, Washington, D.C.:

Disaster Medical Operations: The services of physicians and nurses at the scene of a disaster are shown, as well as the support given the physician through the first-aid services, the blood program, nursing, nutrition, canteen service and motor service.

ROBERT M. FINK and KAY FINK, Veterans Administration Hospital, Van Nuys, Calif.:

Filter Paper Partition Chromatography: The simple type of apparatus used in one and two dimensional filter paper partition chromatography will be on display. Sample chromatograms of amino acids, sugars, organic acids and other classes of compounds will be shown, as well as radioautographs prepared from chromatograms containing radioactive compounds. Included also will be diagrams describing the process and a demonstration of the process with colored compounds showing the gradual separation of the components of a mixture as the chromatogram is developed.

EVERETT S. ELWOOD, National Board of Medical Examiners, Philadelphia:

Qualifying Examinations for Entrance to Medical Practice: The exhibit describes the work and progress of the National Board of Medical Examiners and includes the results of its examinations as well as the use of these examinations by medical schools.

DONALD G. ANDERSON, F. H. ARESTAD, WILLIAM R. ALBUS, EDWARD K. REID, EDWARD H. LEVEROOS and WILLIAM W. CORBETT, Council on Medical Education and Hospitals, American Medical Association, Chicago:

Medical Education and Hospitals: The exhibit displays data on medical education, medical licensure, registration of hospitals, approval of internships, residencies and fellowships, schools for medical technologists, x-ray technicians, physical therapy technicians, occupational therapy technicians and medical record librarians. Revised lists of approved medical schools, hospitals approved for internships and residencies and fellowships and approved technical schools are shown.

Diabetes

HUGH L. C. WILKERSON, MALCOLM J. FORD, DONALD HARTING and ERICH HEFTMANN, Diabetes Section, U.S. Public Health Service, Boston:

Simplified Case Finding in Diabetes Control: There are presented new developments in diabetes case finding; exhibit and demonstration of a new, rapid, screening blood glucose test; blood sugar values on 2,000 "normal" persons from Brookline,

Mass., in relation to time elapsed since last meal, and study of the incidence of diabetes in relatives of a known group of diabetic persons in Jacksonville, Fla. Physicians are invited to have the screening blood glucose test or they actually may perform the tests themselves.

SAMUEL SOSKIN, RACHMIEL LEVINE and HARRY F. WEISBERG, Michael Reese Hospital, Chicago:

Diabetes—Disturbance in Blood Sugar Regulation: The exhibit describes the homeostatic mechanism for the regulation of the blood sugar level, the roles of the endocrine glands in this regulation and the manner in which this regulation is disturbed in experimental diabetes and in diabetes mellitus. Included also is material on the application of this knowledge to the treatment of diabetes mellitus. With this material as a background, the focus of interest in the exhibit will be a working machine representing a mechanical analogy of the blood sugar-regulating mechanism. By means of the level of water in a tank, maintained by mutually regulated inflows and outflows, the machine will record graphs analogous to the normal dextrose tolerance curve. Various adjustments representing endocrine glands will produce abnormal tolerance curves analogous to those seen in endocrine disturbances.

EDWARD S. DILLON, Philadelphia, CHARLES H. BEST, Toronto, GEORGE E. ANDERSON, Brooklyn, N. Y., and FRANK N. ALLAN, Boston, American Diabetes Association:

Diabetes in 1948: The high incidence of hidden diabetes has been demonstrated through the case-finding surveys of the United States Public Health Service and other studies. For every 4 known cases, there may be found 3 cases previously unrecognized. It is now estimated that there are 1,000,000 hidden cases of diabetes in the United States. The American Diabetes Association has taken as a major objective in 1948 the effort to bring these persons with hidden diabetes to light--to find them, treat them and teach them.

HOWARD F. ROOT, ELLIOTT P. JOSLIN, PRISCILLA WHITE, ALEXANDER MARBLE, ALLEN P. JOSLIN, C. C. BAILEY and HERBERT H. MARKS, George F. Baker Clinic, New England Deaconess Hospital, Boston, and Metropolitan Life Insurance Company, New York:

Diabetes in Camp, Home and Hospital: The exhibit presents new data on arteriosclerosis in childhood diabetes compared with diabetes in young adults, treatment of pregnancy and coma, statistical data and plans for a new camp for diabetic boys.

Clinics and Conferences on Diabetes

Clinics and conferences on diabetes will be conducted by members of the George F. Baker Clinic and the American Diabetes Association under the chairmanship of Dr. Howard F. Root, Boston, in an area adjoining the group of exhibits on diabetes. Emphasis will be laid on a search for the million undiscovered persons with diabetes, earlier diagnosis and treatment to avoid coma, aggressive rather than expectant treatment, abolition of death from coma, special care for pregnant diabetics and the education of the patient in the fundamentals of diabetic treatment.

The program follows:

MONDAY, June 21

12 noon. *A Million Unknown Diabetics.* Elliott P. Joslin, Boston.

12:30 p.m. *Insulin and the Future.* Charles H. Best, Toronto.

1 p.m. *Interpretation of Blood Sugar Values.* Herman O. Mosenthal, New York.

1:30 p.m. *Diet and Insulin.* Henry T. Richetts, Chicago.

2:00 p.m. *Acidosis and Coma.* Howard F. Root, Boston.

2:30 p.m. *Insulin Difficulties, Allergy, Atrophy.* Henry B. Mulholland, Charlottesville, Va.

3:00 p.m. *Cushing's Syndrome.* A. L. Chute, Toronto.

3:30 p.m. *Hypoglycemia.* Charles W. Styron, Raleigh, N. C.

4:00 p.m. *Childhood Diabetes.* Priscilla White, Boston.

4:30 p.m. *Insulin Resistance.* I. Arthur Mirsky, Cincinnati.

5:00 p.m. *Advantages of Insulin in Early Treatment.* Walter H. Nadler, Chicago.

TUESDAY, June 22

9:00 a.m. *Arteriosclerosis.* George E. Anderson, Brooklyn.

9:30 a.m. *Diabetic Feet.* William H. Olmsted, St. Louis.

10:00 a.m. *Ketosis and Diabetes.* Rollin T. Woodyatt, Chicago.

10:30 a.m. *Pregnancy and Diabetes.* Priscilla White, Boston.

11:00 a.m. *Diabetic Neuropathy.* R. Wayne Rundles, Durham, N. C.

11:30 a.m. *Case Finding Surveys. U. S. Public Health Service.* Hugh L. C. Wilkerson, Boston.

12 noon. *New Blood Sugar Method.* Erich Heftmann, Boston.

12:30 p.m. *Diabetes Today,* Elliott P. Joslin, Boston.

1:00 p.m. *Blood Sugar Levels.* Edward S. Dillon, Philadelphia.

1:30 p.m. *Treatment During Surgery.* Howard F. Root, Boston.

2:00 p.m. *Diet and Treatment.* Frank N. Allan, Boston.

2:30 p.m. *Hyperinsulinism.* Jerome Conn, Ann Arbor, Mich.

3:00 p.m. *Diabetes During Surgery.* E. Paul Sheridan, Denver.

3:30 p.m. *Diabetes in Childhood.* Henry J. John, Cleveland.

4:00 p.m. *Use of Insulin.* Harry H. Bromley, Cleveland.

4:30 p.m. *Transmetatarsal Amputations.* Clifford C. Franseen, Boston.

WEDNESDAY, June 23

9:30 a.m. *Pregnancy.* Lester J. Palmer, Seattle, Wash.

10:00 a.m. *Control of Diabetes.* Elliott P. Joslin, Boston.

10:30 a.m. *Treatment of Diabetic Feet.* Frederick W. Williams, New York.

11:00 a.m. *Diabetic Coma and Potassium Deficiency.* Howard F. Root, Boston.

11:30 a.m. *Diagnostic Problems.* Chester Coggeshall, Chicago.

12 noon. *Emergencies.* Allen P. Joslin, Boston.

12:30 p.m. *Diabetic Neuritis.* Thomas P. Sherkey, Dayton, Ohio.

1:00 p.m. *Interpretation of Diabetic Statistics.* Herbert H. Marks, New York.

1:30 p.m. *Hyperinsulinism.* Alexander Marble, Boston.

2:00 p.m. *Arteriosclerotic Complications.* Byron D. Bowen, Buffalo, N. Y.

2:30 p.m. *Insulin Resistance.* Leon S. Soelo, Birmingham, Ala.

3:00 p.m. *Intercapillary Glomerulosclerosis.* Henry T. Richetts, Chicago.

3:30 p.m. *Hyperglycemia and Insulin.* Allen P. Joslin, Boston.

4:00 p.m. *Protection of Remaining Extremity in Diabetic Amputations.* Gesa de Takats, Chicago.

4:30 p.m. *Thyroid and Pituitary Complications.* Howard F. Root, Boston.

THURSDAY, June 24

10:00 a.m. *Acidosis.* Howard F. Root, Boston.

10:30 a.m. *Treatment Before and After Surgery.* Blair Holcomb, Portland, Ore.

11:00 a.m. *Tuberculosis and Diabetes.* Howard F. Root, Boston.

11:30 a.m. *Intermediate Insulins.* Arthur R. Colwell, Evanston, Ill.

12 noon. *Complications, Including Hemochromatosis.* Alexander Marble, Boston.

12:30 p.m. *Control of Diabetes.* Joseph H. Barach, Pittsburgh.

1:00 p.m. *Management of the Ambulant Diabetic.* Allen P. Joslin, Boston.

1:30 p.m. *Hypoglycemia, Prevention and Treatment.* Cecil Striker, Cincinnati.

2:30 p.m. *Adenomata of the Pancreas.* Alexander Marble, Boston.

3:00 p.m. *Insulin Mixtures.* Franklin B. Peck, Indianapolis.

3:30 p.m. *Diabetic Coma.* Alexander Marble, Boston.

4:00 p.m. *Severe Diabetes.* Robert W. Keeton, Chicago.

4:30 p.m. *Emergencies (Diabetes "by Phone").* Allen P. Joslin, Boston.

FRIDAY, June 25

10:00 a.m. *Control of Diabetes.* Alexander Marble, Boston.

10:30 a.m. *Insulin and Early Diabetes.* Allen P. Joslin, Boston.

11:00 a.m. To be announced.

Cancer Detection

Cancer detection clinics and the importance of cancer detection in the physician's office will be presented under the auspices of the following committee:

Augusta Webster, Chicago, Chairman.
Charles Branch, Chicago.
H. Alice Phillips, Chicago.
F. Lee Stone, Chicago.
Dunoly P. Slaughter, Chicago.
Kate Edison, Chicago.

Following are the members of the Advisory Committee:

Bowman C. Crowell, American College of Surgeons, Chicago.
Brewster S. Miller, American Cancer Society, New York.
John A. Rogers, Illinois Division, American Cancer Society, Chicago.
James P. Simonds, Northwestern University Medical School, Chicago.
John A. Wolfer, Cancer Committee, Chicago Medical Society, Chicago.

Several of the hospitals in Chicago which conduct cancer detection clinics are also lending aid. The exhibits will show the following:

Standards for Detection Centers, as set up by the American College of Surgeons.
History and Physical Examination Forms and Card Index.
Collection of Statistical Data.
Laboratory Data.
Roentgen Findings in Cancer.
General Physical Examinations.
Skin Cancer and Mucous Membranes.
Eye, Ear, Nose and Throat Examinations.
Cancer of the Male and the Female Genital Tract
Proctoscopic Examinations and Findings.
Cancer of the Breasts.

The exhibits will be accompanied by appropriate charts showing the incidents of accessible cancer, and the instruments needed for detection will be displayed.

Poliomyelitis

C. E. IRWIN and ROBERT L. BENNETT, Georgia Warm Springs Foundation, Warm Springs, Ga., with the assistance of the National Foundation for Infantile Paralysis, New York:

Treatment of Poliomyelitis: The seven stages of treatment of poliomyelitis are shown: (1) save patient's life, (2) prepare for motion, (3) coordinate function and increase strength, (4) increase functional activity, (5) evaluate functional capacity, (6) return home and (7) orthopedic surgery and assistive appliances.

Atomic Energy

HOWARD A. CARTER and FREDERIC T. JUNG, Council on Physical Medicine, American Medical Association,

Atomic Energy--Medical and Physical Aspects: This exhibit consists of (1) demonstrational apparatus, (2) charts and (3) reference material and reprints. There will be a demonstration periodically dealing with the mechanical and electrical makeup of a Geiger-Mueller counter. Charts will briefly describe the most recent information on the therapeutic and diagnostic uses of radioactive isotopes. Pamphlets containing a glossary of terms used in atomic energy and nuclear physics will be distributed. A primer on the medical aspects of atomic energy will be available.

The following consultants have contributed to this exhibit and will aid in the demonstrations:

Edwin C. Ernst, Barnard Free Skin and Cancer Hospital, St. Louis.
Hymer L. Friedell, University Hospitals of Cleveland, Cleveland.
Robert J. Moon, University of Chicago, Chicago.
Robert R. Newell, Stanford University, San Francisco.
Eugene P. Pendergrass, University of Pennsylvania, Philadelphia.
Edith H. Quimby, Columbia University, College of Physicians and Surgeons, New York.
Albert E. Shaw, University of Chicago, Chicago.
Shields Warren, New England Deaconess Hospital, Boston.
Stafford L. Warren, University of California, Los Angeles.
J. L. Weatherwax, American Oncologic Hospital, Philadelphia.

PAUL C. AEBERSOLD and B. G. SAUNDERS, Isotopes Division, and A. H. HOLLAND JR., Office of the Medical Advisor, Atomic Energy Commission, Oak Ridge, Tenn.:

Radioisotopes and Radiation: Exhibits include diagrams and charts explaining radioisotopes and radiation. Photographs explain how radioisotopes are produced in the chain-reacting pile at Oak Ridge and how they are handled and shipped. Charts show the distribution of isotopes according to isotope and geographic location. Illustrative material will be presented on the use of isotopes in therapy, diagnosis and medical research. Actual shipping containers for the various isotopes and representative samples of radioactive materials will be on display.

LEON O. JACOBSON, MATTHEW H. BLOCK, EDNA K. MARKS and EVELYN O. GASTON, Argonne National Laboratory and University of Chicago, Chicago:

Effect of Induced Anemia on Radiation Damage: The exhibit shows that in normal rabbits given a median lethal dose of roentgen radiation (800 r total body) anemia develops which reaches its maximum fourteen days after exposure; in animals that are already anemic by virtue of administration of phenylhydrazine or phlebotomies no further anemia develops after exposure to the median lethal dose of roentgen radiation. Photomicrographic illustrations demonstrate that this difference in effect is due to the virtually complete destruction of erythrocyte precursors in the normal animal after irradiation; in animals already anemic before irradiation, a suf-

ficient number of erythrocyte precursors survive the irradiation to insure a normal production of erythrocytes.

MORRIS T. FRIEDELL, FENTON SCHAFFNER and Wm. J. PICKETT, Hektoen Institute for Medical Research of Cook County Hospital, Chicago:

Radioactive Isotopes—Index of Circulation in Peripheral Vascular Diseases; Effects of Treatment: Radioactive phosphorus or sodium is injected intravenously. Quantitative and qualitative estimates of circulation in normal persons and in persons with peripheral vascular diseases are made, using a Geiger counter. An index of circulatory efficiency is established in persons with normal peripheral circulation. This is compared with an index obtained from persons with peripheral vascular disease. The method of establishing this index and its significance are presented. Alterations of this index are displayed as indicative of relative effects and efficiencies of various methods of treatment of peripheral vascular disease.

DANIEL C. ELKIN and FREDERICK W. COOPER JR., Emory University School of Medicine, Atlanta, Ga.:

Radioactive Isotopes—Their Use as Tracers in Peripheral Circulatory Disturbances: Exhibit demonstrates the methods of utilizing radioactive sodium as a tracer in studies on the circulation. The results of studies are shown.

MYRON PRINZMETAL, ELIOT CORDAY, RAMON J. SPRITZLER and H. C. BERGMAN, Cedars of Lebanon Hospital, Los Angeles:

Radiocardiography—A Method for Studying the Flow of Blood Through the Heart by Means of Radioactive Isotopes: Graphic visualization of the flow of blood through the heart of intact man can now be achieved. Radioactive sodium (Na^{24}) is injected intravenously and traced with specially designed ink-writing Geiger-Mueller counters. One counter tube is placed over the precordium. The recorded curves then represent the blood as it is pumped through the chambers of the heart. The first ascent records the blood as it enters the right heart; as the right ventricle empties, the curve descends. The second wave rises as the blood returns from the pulmonary circuit to the left chambers and descends when the blood is expelled from the left ventricle. Records are shown which are characteristic of such heart conditions as congestive failure and congenital heart disease. The diagnostic and physiologic significance of this new method are demonstrated. Venous return is also easily traced by placing another counter tube over a vein between the site of injection and the heart. In this way, data has been obtained which has increased knowledge and understanding of venous thrombosis, the peripheral circulation and circulation time. Radiocardiography thus offers a new, graphic method for the study of hemodynamics.

UNITED STATES ARMY, UNITED STATES NAVY and UNITED STATES AIR FORCE, Department of National Defense, Washington, D.C.:

A General Practitioner in the Atomic Age: The Army, Navy and Air Force of the Department of National Defense will display jointly an exhibit designed to show the basic principles of radiation due to the explosion of an atomic bomb, the relationship of fission products to the practice of medicine and general information relative to internal and external injuries and the therapeutic principles applicable thereto.

HERMAN LISCO, MIRIAM P. FINKEL, AUSTIN M. BRUES and JANE GLASER, Argonne National Laboratory, Chicago:

Pathologic Effects of Radioactive Elements: The exhibit will consist of colored photographs indicating the pathologic changes encountered when plutonium and radioactive isotopes are administered to animals. These changes include hepatic diseases caused by plutonium and various types of tumors and skin changes due to radioactivity. There will also be reproductions of roentgenograms of animals showing bone changes.

PHILIP M. MORSE, ROBERT D. CONRAD and LESLIE F. NIMS, Brookhaven National Laboratory, and ELDON C. SHOUP, Associated Universities, Inc., Upton, N. Y.:

Research Facilities: The exhibit depicts the role of Brookhaven National Laboratory as the regional center for the Northeast in fundamental nuclear research. Brookhaven's principal purposes are to carry through fundamental research and to provide staff and research facilities for the training of scientists and for work being done by accredited scientists and institutions in the region. Acting as the agent for all the educational institutions in the Northeast, nine universities formed Associated Universities, Inc., a nonprofit corporation which is the contractor for the building and administration of the Laboratory under the auspices of the United States Atomic Energy Commission.

ROBERT T. NIESET, WALTER J. TRAUTMAN Jr., RALPH M. BELL, BLANCHE PORTER, WILLIAM PARSON, CHAMP LYONS and H. S. MAYERSON, Tulane University School of Medicine and Alton Ochsner Medical Foundation, New Orleans:

Measurements of Total Red Cell Mass with Patients' Cells Tagged with P^{32}: The exhibit shows a method for the determination of total red cell volume and its application to clinical problems. A 10 cc. sample of venous blood is incubated with radioactive phosphorus (P^{32}) and the tagged cells reinjected into the patient, allowed to mix for ten minutes, and a second sample of blood taken for estimation of the dilution which has occurred. The general principles involved, the method of separation and preparation of the red cells for reinjection and radioactive assay and calculation will be described. Evidence for binding of radioactive phosphorus by the red cell and data on the accuracy of volumetric technics as well as on the reproducibility of the radioactive measurements will also be given. Applications of the method to surgical and medical cases involving various dietary procedures, transfusion, etc. will be presented.

MOTION PICTURES

Two motion picture theaters, located in rooms adjacent to the exhibits, will be in continuous operation. Each film will be shown once daily, Monday morning to Friday noon, on a definite schedule.

GEORGE E. SHAMBAUGH JR., Northwestern University Medical School, Chicago:

The Fenestration Operation for Otosclerosis: The film consists of animation in part, depicting the steps of the fenestration operation, followed by an actual picture of the operation itself on a patient, beginning with the hearing test before operation and ending with her audiogram three weeks after operation. In addition to the technic of the operation, the indications for it are briefly taken up. Silent, forty-three minutes.

PAUL H. HOLINGER, University of Illinois College of Medicine, Chicago:

Organic Disorders of the Larynx: The film shows the various disorders of the larynx which affect speech. It stresses the relation of organic pathologic changes to vocal function and shows various types of benign and malignant tumors, paralyses and inflammatory processes of the larynx as they appear

V 1
194

on the laryngeal mirror or through the direct laryngoscope. Silent, twenty-five minutes.

ROGER W. BARNES and IVAN E. MARTIN, College of Medical Evangelists, Los Angeles:

Repair of Vesicovaginal Fistula: Motion picture shows the technic of repair of vesicovaginal fistulas. The inverted Trendelenberg position is used and a thick layer of tissue is built up between the bladder and the vagina. Silent, color, twelve minutes.

M. M. KNISELY, W. K. STRATMAN-THOMAS, T. S. ELIOT and E. H. BLOCK, University of Chicago, Chicago, and University of Tennessee, Memphis, Tenn.:

Knowlesi Malaria: This is the first motion picture taken through a microscope showing the pathologic circulatory physiology in a living animal through the whole course of a mammalian disease. The film shows that normal circulating blood is not agglutinated and shows the course of events after the development of the killing sludge. The effect of one drug in breaking up the masses of which the sludge is composed is presented. Silent, forty minutes.

WILLIAM BICKERS, Richmond, Va:

Primary Dysmenorrhea: The motion picture shows a study of the endometrial pattern, basal temperature curve, myometrial contraction patterns, and intrauterine pressures in patients with dysmenorrhea. The intrauterine balloon technic for recording uterine contractions is presented. Treatment is discussed. Silent, forty-nine minutes.

MYRON PRINZMETAL, H. C. BERGMAN, ELIOT CORDAY, H. E. KRUGER, LOIS SCHWARTZ, ETHEL FOLADARE, R. J. SPRITZLER and S. A. SANFORD, Cedars of Lebanon Hospital, Los Angeles:

Studies in Coronary Circulation: Selected studies in coronary artery disease are presented in slow-motion color pictures, some taken at 1,000 frames per second (up to 65 times normal speed). By the intravenous injection of fluorescein, (made photographically visible under near-ultraviolet light), the coronary circulation is visualized. Shock is revealed as an aggravating force in causing myocardial damage when associated with coronary insufficiency or coronary occlusion. Coronary arteries are proved not to be end arteries physiologically. Other included studies show the effects of asphyxia; the amazing myocardial reserve (15 per cent of contracting myocardium is sufficient to maintain normal hemodynamics), and a vivid first photographic demonstration of coronary artery spasm. Silent, thirty minutes.

LOUIS E. MOON and J. B. CHRISTENSEN, Creighton University School of Medicine, Omaha, Neb.:

An Improved Technic for the Operative Treatment of Anorectal Lesions: Simple, practical and successful methods of making proctologic examination are presented and operative procedures for the treatment of common anorectal lesions demonstrated. A routine proctologic examination is shown, with animated, anatomic illustrations reviewing the anatomy of the region followed by close-up shots of the examination in actual cases. A simple ligature type of operation for removal of internal and external hemorrhoids is shown, as well as operations for anal fissure, abscess and a simple fistula. Silent, forty-four minutes.

WALTMAN WALTERS, Mayo Clinic, Rochester, Minn.:

Transabdominal Resection of the Gastric Nerves (Vagi) in the Treatment of Peptic Ulceration: The technic of transabdominal vagotomy is shown in a case of gastrojejunal ulcer. The film shows a few steps of the removal of the gastroenterostomy and the gastrojejunal ulcer so as to orient the audience. The major part of the film consists of the exposure of the lower part of the esophagus, demonstration of the vagus nerves and their section. Silent, seventeen minutes.

MALCOLM R. HILL and ROBERT L. BELT, College of Medical Evangelists, Los Angeles:

Two Team Abdominoperineal Resection: The picture shows operating room setup, with technical approach for two team abdominoperineal resection for carcinoma of rectum. Silent, nine minutes.

PHILIP THOREK, Chicago:

Surgical Treatment for Carcinoma of the Lower End of the Esophagus: This case presents the extension of a carcinoma of the cardiac end of the stomach into the esophagus. A transthoracic partial esophagogastrectomy was performed with an end to side esophagogastrostomy. Roentgenograms and the patient's postoperative course amplify the film. Silent, forty-six minutes.

ARNOLD S. JACKSON, Jackson Clinic, Madison, Wis.:

Electrosurgical Thyroidectomy for Hyperthyroidism: This picture illustrates some of the important tests used in the diagnosis of hyperthyroidism. It shows the preoperative steps used for thyroidectomy, the technic of operation, with both the scalpel and the electrosurgical knife, and the postoperative care. Silent, thirty minutes.

HERBERT CONWAY, New York Hospital and Cornell University Medical College, New York:

Tattooing of Skin Grafts and Port Wine Stains: This film shows the technic of tattooing as a form of medical therapy for the coloration of skin grafts on the face, and the permanent camouflage of port wine stains (capillary hemangiomas) by pigment injections. The technic of administration and appearance of patients before and after the treatment is demonstrated. Silent, twelve minutes.

H. R. REICHMAN and SCOTT SMITH, Salt Lake City:

Sigmoidotomy for Removal of Pedunculated Adenoma: The film shows the importance of adenomas of the colon. When roentgen studies of the colon are negative diagnosis is made by the proctoscope. Spinal anesthetic with supplement is used in a 9 year old boy. Silent, seventeen minutes.

LEES M. SCHADEL JR., Hahnemann Medical College and Hospital, Philadelphia:

Meperidine and Pudendal Block: Obstetric analgesia is obtained with meperidine and scopolamine in a primigravida. For anesthesia a new technic of perineal block is illustrated by a review of the nerve supply to the perineum and the landmarks referable to this block technic and also by a close-up showing the technic to be followed and a demonstration of its effect in producing complete perineal anesthesia. The episiotomy and delivery show spontaneous breathing of an infant without any signs of depression. Inspection of the cervix and repair are shown, and the area is retested for complete anesthesia. Silent, fifteen minutes.

WILLIS J. POTTS, SIDNEY SMITH and WILLIAM O. McQUISTON, Children's Memorial Hospital, Chicago:

Aortic Pulmonary Anastomosis for Congenital Pulmonary Stenosis: The surgical treatment of pulmonary stenosis is presented, and the technic of aortic pulmonary anastomosis, or the Potts-Smith operation, is shown in detail. By use of animation the exact technic of suture of the aorta to a pulmonary artery is shown. Silent, thirty-six minutes.

GEORGE L. WESSELS and ROBERT L. PATTERSON, Allegheny General Hospital, Pittsburgh:

Modern Trends in Intravenous Therapy: The film presents a simplified technic for administering large volume intravenous fluids with both conventional and disposable equipment. Technics for blood transfusion, blood banking and preparation of plasma are also shown. Silent, thirty-seven minutes.

R. P. WALTON and O. J. HODDE, Medical College of South Carolina, Charleston, S. C.:

Effect of Drugs on the Heart in Situ: The mammalian heart, exposed in an open chest preparation with mechanical respiration, is shown during the response to administration of typical cardiovascular drugs. Simultaneous recordings with blood pressure manometer and electrocardiographic tracings are shown synchronously in slow motion. The effects of autonomic drugs, of anoxia and of various degrees of digitalis intoxication are shown. Protection of the ventricle against electrically induced auricular fibrillation and increased myocardial contractile force as produced by digitalis are demonstrated. Silent, twenty-eight minutes.

CARROLL L. BIRCH and LOUIS R. LIMARZI, University of Illinois College of Medicine, Chicago:

Animated Hematology—Bone Marrow: The picture shows general considerations of normal bone marrow, its embryology and development, technic of bone marrow study and pathology of bone marrow (anemias, leukemias, Gaucher's disease, multiple myeloma, leishmaniasis, malaria, etc.). Bone marrow is shown by "kodachrome" photomicrographs. Silent, fifty minutes.

FRANKLIN F. SNYDER, Boston Lying-In Hospital Boston:

Breathing Before Birth and Its Obstetric Significance: The picture demonstrates that babies breathe before birth as shown by the rhythmic movements transmitted through the abdominal wall of the mother. They breathe the amniotic fluid in which they are immersed, thus preparing the lungs for the first gasp of air following delivery. Intrauterine pneumonia results from breathing contaminated amniotic fluid, such as follows premature rupture of the membranes. The introduction of carbon particles into the amniotic fluid in a rabbit is shown and the black lungs of the fetus a few minutes later are striking. The placental circulation is shown, and it is evident that fetal activity is not due to asphyxia, but is associated with highly oxygenated (bright red) blood. Analgesic drugs given to the mother can be compared with respect to the amount and duration of their depressant effects on the fetus independent of the complications of labor. Silent, forty minutes.

H. L. SMITH, H. E. ESSEX and E. J. BALDES, Mayo Clinic, Rochester, Minn.:

A Study of the Movement of Heart Valves of Various Laboratory Animals: The hearts of various laboratory animals were perfused and kept beating for various lengths of time. Openings were made in the different chambers of the hearts, and motion pictures were made of the exact movements of the mitral, tricuspid, aortic and pulmonic valves. Silent, twenty-three minutes.

FREDERICK F. TISDALL, University of Toronto and Hospital for Sick Children, Toronto, Canada:

Ascorbic Acid and Scurvy: This motion picture is a clinical lecture on ascorbic acid and its use in the prevention and treatment of scurvy. There are some references to the part that ascorbic acid plays in the general metabolism of the body and in other clinical conditions encountered. Sound, twenty-five minutes.

SOMERS H. STURGIS and JOHN ROCK, Massachusetts General Hospital and Free Hospital for Women, Boston, and Brookline, Mass:

The Physiology of Normal Menstruation: The picture shows by diagrammatic animation the production of pituitary and ovarian hormones, the response of the ovaries to pituitary stimulation and the response of the endometrium to ovarian stimulation. The coordinated activity of pituitary, ovaries and endometrium is summarized. Use of photomicrographs of the endometrium in various phases demonstrates actual histologic changes. Sound, twenty-two minutes.

A. E. GOLDSTEIN, Sinai Hospital and University of Maryland, Baltimore:

Surgery for Polycystic Renal Disease: This surgical procedure was suggested by the author twelve years ago. Each kidney is exposed separately. All available cysts are opened and drained. The kidney is then split in half lengthwise, down to the calyces and each half is sutured to the skin for future puncturing. While this is not a cure; symptoms have been relieved and life has been prolonged in many cases. Silent, fourteen minutes.

D. C. HINES, Lilly Laboratory for Clinical Research, Indianapolis, Ind., and A. C. Corcoran and I. H. PAGE, Cleveland Clinic, Cleveland:

Kidney Function in Health: The film begins with a brief characterization of the role of the kidneys and the general principles of their function. It then follows the course of the blood to a glomerulus and describes the factors governing filtration and the various renal function tests concerned with filtration. The filtrate is then followed step by step through the renal tubule, the actions of the various sections being illustrated as they are reached. Sound, thirty-eight and one-half minutes.

SPECIAL EXHIBIT COMMITTEE ON PHYSICAL MEDICINE: The following motion pictures are presented in conjunction with the Special Exhibit on Physical Medicine:

Toward Independence. United States Army film. Sound, thirty minutes.

Physical Medicine Service. United States Army film. Fifteen minutes.

Return to Action. United States Army film. Nineteen minutes.

Dynamic Physical Reconditioning. United States Army film. Thirteen minutes.

First Steps. United Nations Film. Ten minutes.

UNITED STATES ARMY, Medical Department, Washington, D. C.:

Aneurysms, Part I - Quadruple Ligation and Excision of Arteriovenous Fistula of the Femoral Vessels, Lower Third: The motion picture presents the preoperative findings, surgical procedure, and postoperative picture of an interesting and important vascular injury, which in this case resulted from a shell fragment wound. It covers the subject in detail and emphasizes the precautions that must be taken during surgery. Sound, ten minutes.

Arteriovenous Fistula with False Sac of Lower Femoral Vessels (Quadruple Ligation and Excision): Essential phases of a preoperative examination for this type of injury are portrayed and the details of surgery, to include fistula and false sac removal, are clearly shown and described. Sound, fifteen minutes.

Management of Abdominal Colostomies (Intraperitoneal Closures): Pertinent factors associated with the management of transverse, left side, and sigmoid colostomies, including intraperitoneal closure technics are shown. As presented, a comparison of the problems confronting the operator can be seen readily. Sound, twenty-four minutes.

Management and Technic of Pulmonary Lobectomy: A complete presentation of the subject, including preoperative program, surgical procedure, bronchoscopic and radiographic phases, postoperative program, and measures taken to effect an active convalescence. Sound, twenty-seven minutes.

V 1
194

The TECHNICAL Exposition

The popularity and importance of the Technical Exposition to the medical profession will again be demonstrated not only by the increased number of exhibitors but in the quality of the exhibits themselves. It will be a fitting testimonial to the faith and vision of the manufacturers and the profession which they serve.

In 600 units of space, stretched over the vast expanse of the upper deck of the Navy Pier, jutting out into Lake Michigan, six long rows of fine displays will show the technical skill and manufacturing genius brought to the 1948 Session. The arrangement is such that any one exhibit may be readily located.

In attractive, brief form, the exhibits will reveal the physicians' modern armamentarium for his combat with disease. Here the physician can leaf through or examine leisurely almost the entire line of foremost and latest medical books. He can pick up and admire fine precision instruments; see demonstrations of highly specialized apparatus; gain first-hand information concerning the newer discoveries in antihistaminic, antibiotic, amino acid, and hormonal therapy; learn latest facts about the newer methods of diagnosing cancer, the therapeutic effects of foods and their relation to health. The same applies to special apparel, infant items, hypo-allergenic cosmetics, specialized services, and other time-honored standbys that fill an important place in the physician's scheme of things. If the venerable " horse and buggy " doctor of long ago could visit the 1948 Annual Technical Exposition, no doubt he would remark: " What a rich legacy of new and better methods the present-day physician is heir to! What a long way we have come "!

The exhibits will be open daily from 8:30 A.M. to 6:00 P.M. each day beginning Monday, June, 21 and closing noon, Friday, June 25. These hours together with the close proximity to the scientific exhibits will make it unusually convenient to add to your well of knowledge and expand your resevoir of information...for indeed, the Technical Exposition will be a most stimulative and educational feature; and, capable, highly trained attendents will be on hand to bring these exhibits to life and make them a dramatic summary of results achieved by the cooperation of medical industry with medical science.

Following are brief descriptions of some of the exhibits to aid you in knowing in advance which displays most intimately relate to your problems. You are cordially urged to spend as much time as possible visiting the Technical Exhibition.

Thos. R. Gardiner,

Business Manager and Director of Technical Exhibits

LIST OF TECHNICAL EXHIBITORS WITH DESCRIPTIVE ITEMS RECEIVED UP TO PRESS TIME

ABBOTT LABORATORIES
Booths A-74, A-76, B-75, B-77

"The Sneezing Man," an ingenious mechanism dramatizing the trials of an allergy victim, will highlight an unusual exhibit by Abbott Laboratories on an antihistaminic drug. Other Abbott products to be featured are Pentothal Sodium, a brief-acting barbiturate for intravenous use; and Tridione, a drug for the control of the petit mal triad and other convulsive seizures.

AHLSTROM SURGICAL COMPANY
Booth C-134

The Ahlstrom Surgical Company—a new exhibitor—will feature a selected line of fine surgical instruments, hospital supplies and physicians' supplies. The display will include various instruments for E.E.N.T., Neurological, Plastic, and General Surgery.

U.D. ALLISON COMPANY
Booth A-84

A new and wonderful surprise awaits you at the Allison exhibit this year. You won't want to miss it!

ALWAY, INC.
Booth C-79

An attractive display of hypo-allergenic cosmetics may be inspected in the Alway exhibit. A feature of this exhibit will be Alway Hypo-Allergenic Nail Polish. Specific information and descriptive literature on these scientifically formulated cosmetics will be made available to all physicians by members of the Alway staff.

A. S. ALOE COMPANY
Booths C-173, C-175

AMERICAN CAN COMPANY
Booth B-129

AMERICAN CYSTOSCOPE MAKERS, INC.
Booth B- 115

Among the attractions at the American Cystoscope Makers, Inc. booth, will be new telescopic bronchoscopes, gastroscopes, and other telescopic diagnostic instruments; catheters; and electrosurgical equipment.

AMERICAN HOSPITAL SUPPLY CORPORATION
Booths A-8, A-10

The American Hospital Supply Corporation will exhibit a full range of Baxter Parenteral Products—Intravenous Solutions including the Blood Transfusion and plasma equipment plus disposable accessories for the administration there of; Blood grouping Serums that excel in accuracy, speed and dependability; and certain selected Venoc products that simplify, if not solve many hospital problems.

AMERICAN OPTICAL COMPANY
Booths A-142, A-144, A-146, A-148

AMERICAN PHYSICIANS ART ASSOCIATION
Adjacent to Scientific Exhibits

Here you will see an unprecedented ART SHOW of outstanding works by members of the American Physicians Art Association—and don't forget to vote for your idea of the best art object at this Exhibition. The winning doctor will be awarded the truly handsome permanent "Popularity Trophy" —on display at the Art Show.

AMERICAN SEAL-EAP CORPORATION
Booth B-96

AMERICAN STERILIZER COMPANY
Booths B-157, B-159

AMES COMPANY, INC.
Booths B-34, B-36

Berbelin, the standard hydrocholeretic agent for the treatment of biliary tract diseases, will occupy a prominent place in the Ames exhibit. Another interesting feature will be a demonstration of Clinitest and Benatest—simplified tests for the detection of urine-sugar and occult blood.

AMICO
Booth A-164

Outstanding radiographs made with both screen and non-screen techniques will be exhibited here. An unusual and interesting display of Amico Color transparencies will show the natural and true color recording of the original subject. Don't fail to test your "color sense" (visibility and appreciation of color) with a series of special Amico Color transparencies.

APPLETON-CENTURY-CROFTS, INC.
Booth C-36

Of particular interest in the Appleton-Century-Crofts exhibit are the new 9th (1948) Edition of Zinsser & Bayne-Jones, TEXTBOOK OF BACTERIOLOGY under new authorship; the new 2nd (1948) Edition of Bridges, ABDOMINAL OPERATIONS; Dr. Wallace Morrison's DISEASES OF THE EAR, NOSE AND THROAT; the new 5th (1948) Edition of Cole & Elman's GENERAL SURGERY; and advance information on many important titles and revisions which are in preparation.

ARMOUR AND COMPANY
Booth B-31

For their initial exhibit at a general session, Armour Toiletries, a division of Armour and Company, is presenting Stork Baby Products. These products consist of the famous Stork Castile Soap, for 40 years a leader in baby's complexion care, and the scientifically prepared Stork Baby Oil and Stork Baby Powder. All three of these products are accepted for advertising in A.M.A. publications.

THE ARMOUR LABORATORIES
Booths A-168, A-170, A-172

The Armour Laboratories, a pioneer in the field of Endocrinology, will welcome members of the American Medical Association at the Armour exhibit in booths A-168, A-170, A-172. If you have not received copies of Armour booklets on THE THYROID GLAND, FUNCTION AND MALFUNCTION OF THE BILIARY SYSTEM, and ARMOUR ATLAS OF HEMATOLOGY, you may secure them at the Armour booths.

THE GORDON ARMSTRONG COMPANY, INC.
Booth B-32

The Armstrong X-4 Baby Incubator -- tested and approved by Underwriters' Laboratories for use with oxygen -- may be seen here. It supplies heat, humidity, and oxygen for the physician to use in the treatment of premature or any sick or debilitated baby. An emergency service has been established for rush shipments by Air Express to all parts of the world.

AYERST, MC KENNA & HARRISON, LIMITED
Booths C-57, C-59

The potency of "Premarin," its convenience of administration and flexibility of dosage, will be summarized in the Ayerst, McKenna & Harrison booth. "Premarin (Estrogenic Substances, water-soluble) is a highly effective and well tolerated preparation of naturally occurring, orally-active, conjugated estrogens (equine). The potency of "Premarin" is expressed in terms of its principal estrogen, sodium estrone sulfate.

C. R. BARD, INC.
Booth B-27

BARNETT OPTICAL LABORATORIES
Booth C-46

BARRY LABORATORIES, INC.
Booth A-111

BAUER & BLACK
Booths C-85, C-87

W. A. BAUM CO. INC.
Booths C-101, C-103

All models of the Lifetime Bonnometer will be displayed and demonstrated for the doctors in attendance. Those who maintain a central examining place will be especially interested in investigating the WALL Model Bonnometer. In addition, a full line of accessories - including special infant and child size blood-pressure cuffs will be available at the Baum exhibit.

BAUSCH & LOMB OPTICAL CO.
Booths A-60, A-62

A number of important new scientific instruments for research, diagnosis and refraction will be on display at the Bausch & Lomb exhibit. Included will be the "L" Camera, for photomicrography; the "E" research microscope with low position, find adjustments; Fluorescence accessories for quick, positive T.B. diagnosis; Phase contrast accessories for examining unstained specimens; and the Allen Gonioscope Prism for exploration of the anterior chamber angle of the eye.

BAYBANK PHARMACEUTICALS, INC.
Booth A-70

BECK-LEE CORPORATION
Booth B-80

BECTON, DICKINSON & COMPANY
Booths C-161, C-163

BEECH-NUT PACKING COMPANY
Booth A-173

Nutritionists in attendance at the Beech-Nut exhibits will be glad to answer any questions regarding the thirty-seven varieties of Beech-Nut strained and junior foods. They will also be happy to describe their Nutrition Program and will have on hand the charts which they use to teach mothers in various "well-baby" clinics.

BELTONE HEARING AID COMPANY
Booth C-170

In addition to a demonstration of special fitting procedure, showing how Beltone Hearing Aids can be "automatically" fitted to all types and degrees of hearing loss by the use of the Selectometer, the Beltone display will show the new Symphonette model, with the "dime size" R-3 receiver, which delivers 2 to 4 times more sound intensity than previous models.

CHARLES BESELER COMPANY
Booth C-62

THE BEST FOODS, INC.
Booths B-100, B-102

A visit to the Best Foods exhibit will clearly show you the nutritional value of Nucoa, the wholesome nutritious vegetable margarine, which contains 15,000 units of Vitamin A to the pound. Also of interest will be the famous Best Foods Hellmann's Real Mayonnaise and the other Best Foods Products. Miss Elsie Stark, Director of Consumer Education, who will be in charge of the booth, will welcome questions about the products.

THE BILHUBER-KNOLL CORP.
Booths B-145, B-147

The Bilhuber-Knoll Corporation will present Diluvdid, Metrazol, Theocalcin, and other "Council-Accepted" medicinal chemicals that have established their place in the physician's individualized prescriptions. Your visit to booths B-145 and B-147 and your discussions of these prescription chemicals will be welcomed.

J. BISHOP & CO. PLATINUM WORKS
Booths A-51, A-53

The Bishop exhibit will feature Bishop Blue Label hypodermic needles, the Albulon needle, the first hypodermic needle with a plastic hub, and other newly developed specialized needles for special work. The latest improvements in hypodermic medication methods will also be presented by a specially trained group of representatives.

THE BLAKISTON COMPANY
Booth C-39

The Blakiston Company will have an attractive exhibit of new and standard books. In addition, there will be advance information on forthcoming titles of importance to the profession. A number of new titles have been added to the Blakiston Recent Advances Series. Ask to see: Ricci DIAGNOSIS IN GYNAECOLOGY; Smith and Goult ESSENTIALS OF PATHOLOGY; Stitt, Clough and Broun PRACTICAL BACTERIOLOGY, 10th Edition; Lillie HISTOPATHOLOGIC TECHNIC; Epstein STRABISMUS; Fishbein MEDICAL WRITING.

THE BOOK SHOP BINDERY
Booth C-22

The atmosphere of a pleasant, attractively arranged reception room will greet visitors to the Book Shop Bindery exhibit. Among the authentic appointments of this inviting room will be several issues of standard medical journals in the distinctive gold-stamped binding designed by the Book Shop Bindery and authorized by the publishers. Visiting physicians are invited to inspect the volumes and to make any inquiries they wish about the materials and workmanship, the convenience, practicality, economy and background value of adopting authorized book bindings for their own reception rooms.

BORCHERDT MALT EXTRACT COMPANY
Booth B-169

THE BORDEN COMPANY
Booths C-31, C-33, C-35, C-37

THE GEORGE W. BORG CORP. (GIBBS DIVISION)
Booths B-164, B-166, B-168, B-170

A feature of the George W. Borg Corporation's exhibit on x-ray equipment will be the Deep Therapy Machine utilizing high frequency which makes it possible to have a very small transformer. Another BORG feature will be a hand-rock table that has a true Trendelenburg at all the degrees of angulation instead of the customary three positions. It is controlled by a push button on the rocking handle, which operates a solenoid on the gear segment.

BRACKE-SEID X-RAY CO., INC.
Booths A-169, A-171

PAUL E. BRANDNER
Booth C-100

V 1
194

JOHN H. BRECK, INC.

Booth A-83

Breck industrial preparations on display here will include Breck Hand Cleaner, a bland, mild, nonirritating cleaner; Breck pH7 Protective Cream, of great value in many industrial plants where employees come in contact with irritants; Breck Water Resistant Cream, which forms a protective film of material, resistant to the action of water and water soluble substances; and Breck Work Cream, a protective cream to help prevent defatting of the hands.

GEORGE A. BREON & COMPANY

Booth A-94

Rest, a cordial welcome, and, if you're in the mood, conversation—even pertinent information—await the eager but not insusceptible conventioneer in the Breon "garden." There a lighted fountain bubbles from a vine-covered wall. Soft cushioned seats will take the weight off your feet while you renew your wind and your acquaintance with Breon representatives.

BREWER & CO., INC.
Booth C-136

BRISTOL LABORATORIES, INC.

Booths A-9, A-11

The BRISTOL LABORATORIES' exhibit will be devoted to the display of penicillin and pharmaceutical products. Qualified representatives will be on hand to assist the medical profession with any inquiries. Literature describing Bristol products will be available.

BRUSH DEVELOPMENT COMPANY
Booth C-92

THE BURDICK CORPORATION

Booths A-58, A-60

The Burdick Corporation will display their new F.C.C. approved Diathermy Unit, Model X-85, a special feature of which is the Contour Applicator; modern Infra-Red and Ultraviolet Lamps; Low Voltage apparatus; and the Rhythmic Constrictor. Visiting doctors and nurses are invited to register for a free copy of the "Syllabus," a compilation of information on the use of Physical Medicine Equipment.

BURNS CUBOID COMPANY

Booths C-165, C-167

Burns Cuboid Company will bring to the Convention a specially constructed, colorful Masonite display redesigned to show more graphically the various raises of these featherlite, metal free adapters. A companion piece will show many of the 176 size variations which permit more accurate fitting. Reprints of HYGEIA ads which tell the complete story of Cuboids will also be displayed.

BURROUGHS WELLCOME & CO. (U.S.A.) INC.

Booths A-2, A-4

Large THREE-DIMENSIONAL color photography will be used here to illustrate the important features of 'Wellcome' GLOBIN INSULIN and 'DEXIN'. Be sure to stop by to see this unusual development.

BURTON MANUFACTURING COMPANY
Booth B-79

CAMBRIDGE INSTRUMENT CO., INC.
Booth A-72

CAMEL CIGARETTES
(MEDICAL RELATIONS DIVISION)
Booths B-74, C-75

CAMERON SURGICAL SPECIALTY COMPANY

Booths C-115, C-117

Among the items to be demonstrated at the Cameron exhibit are Cauterodynes and Cauteradios for Electro-surgery, Electro-cauterization and Electro-coagulation; Coagulair-Sigmoidoscope; Electro-Diagnostic Lamps and Instrument Sets; Radiolucent Cannula; the new Flexible Gastroscopes with treated and coated lenses; Flexible Esophagoscopes; Bronchoscopes; Esophagoscopes; Laryngoscopes; Mirror, Headlites; Binocular Spectacle Loupe; Magniscope and other Specialties.

S. H. CAMP & COMPANY

Booths C-68, C-70

A series of illuminated transparencies depicting anatomical conditions before and after application of Camp Anatomical Supports will be displayed. Experts in attendance will answer questions pertaining to the scientific application of Anatomical Supports and advise regarding the availability of them in Authorized Service Departments throughout the country.

CANADIAN RADIUM AND URANIUM CORP.
Booth A-117

CARNATION COMPANY

Booths C-89, C-91

Here you will see an attractive display on Carnation Evaporated Milk - " the milk every doctor knows." Valuable information on the use of this milk for infant feeding, child feeding, and general diet, will be presented; and the method by which Carnation is generously fortified with pure crystalline Vitamin D - 400 U.S.P. units per reconstituted quart - will be explained. Interesting literature will also be available for distribution.

WILMOT CASTLE COMPANY

Booths A-30, A-32, A-34

Your inspection of the latest in Sterilizing and lighting Equipment will be welcomed at the Castle booth. A valuable booklet entitled, HOW TO BUY A STERILIZER, will be available for the doctor or his nurse.

CENTRAL PHARMACAL COMPANY
Booth A-17

THE CENTRAL SCIENTIFIC COMPANY

Booth B-90

The item of main interest in the Central Scientific display will be the powerful Waring Blendor in actual operation—for rapid disintegration, pulping, and mixing of foodstuffs; for studies in nutrition, vitamin assay, etc; or for the preparation of vaccines, enzymes, bacteria, and viruses. Included in the display will be electronic titration-pH meters, photoelectric filter photometers, and other new instruments for research and clinical laboratory procedures.

CEREAL INSTITUTE, INC.

Booth A-16

"What Are You Doing About Breakfast?" will be the theme of the materials to be presented at the Cereal Institute exhibit. These materials have proven to be serviceable to professional leaders and teachers who are concerned with teaching the importance of an adequate breakfast in the daily diet. Complimentary copies of CEREALS AND THEIR NUTRITIONAL CONTRIBUTION, and THE CEREAL AND MILK STORY will be available.

THE CHICAGO DIETETIC SUPPLY HOUSE, INC.
Booth A-67

CHURCH & DWIGHT CO., INC.

Booth B-25

Interest in the Church & Dwight exhibit this year will center on its well-known Bicarbonate of Soda, Arm & Hammer and Cow Brands. These brands of U.S.P. quality are used extensively in Medical Practice, but this year emphasis will be placed on their value as a powder for cleaning the teeth. The Council on Dental Therapeutics has accepted the products as dentifrices. Booklets designed to stimulate child interest in Oral Hygiene will be distributed.

CIBA PHARMACEUTICAL PRODUCTS, INC.

Booths B-165, B-167

For complete information on latest developments in the use of PYRIBENZAMINE, the antihistaminic for relieving symptoms of allergy, visit the Ciba booth. Also featured will be PRIVINE Hydrochloride, the effective long lasting nasal vasoconstrictor. Representatives in attendance will gladly answer any questions you may have concerning these products and to furnish you with literature and samples.

THE CILKLOID COMPANY

Booth C-88

Visitors to this booth can examine the Perforated Form of Cilkloid and obtain information concerning its use as a Non-Adherent Direct Dressing for skin grafts, burns, ulcers, plastic surgery, etc. Industrial surgeons will also be interested in knowing about the Impervious Form of the Cilkloid for protective and occlusive dressings. Both forms will be of especial interest to hospital personnel.

CLAY-ADAMS COMPANY, INC.

Booth C-56

Clay-Adams exhibit will feature equipment for the new cytological technics, blood testing equipment, and new developments in laboratory and diagnostic equipment. There will be a display of visual aids for teaching and study including Medichromes, anatomical charts, obstetrical manikins, and osteological preparations.

CLERSITE CO.
Booth C-82

COCA COLA COMPANY

Booth A-132

"Pause...and refresh" will be the feature of hospitality centering in the Coca Cola lounge. This invitation means a pure, thirst-quenching, wholesome drink and is extended to all visitors.

WARREN E. COLLINS, INC.

Booth A-13

At Warren E. Collins exhibit will be seen a fine display of scientific respiration apparatus. These include the Drinker-Collins Duplex Respirator; the Benedict-Roth Metabolism Apparatus for routine metabolism work and lung function studies; the Collins Open-Top Oxygen Tent; and the Drinker-Collins Infant Respirator. Skilled factory technicians will be in attendance to welcome you.

COLWELL PUBLISHING COMPANY

Booth B-17

Of special interest to all physicians will be a new line of letter-size DAILY LOG history sheets, designed for general practice and most specialties. The DAILY LOG for Physicians and the regular line of card size ledgers and histories may be examined. Efficient indexing and filing of medical records will be demonstrated and questions about medical record procedures will be welcomed.

C. S. C. PHARMACEUTICALS

Booth C-139

The display of C.S.C. Pharmaceuticals will feature a large portrait of Sir Alexander Fleming, one of the pioneers in the development of penicillin. In 1929 Fleming observed that the mold, Penicillum notatum, elaborated a substance which inhibited the growth of bacteria. From this chance laboratory observation has come one of the most powerful therapeutic agents ever placed in the hands of physicians, a tribute to the scientific alertness of Fleming. The C.S.C. display will also feature full color reproductions of disease processes amenable to penicillin - C.S.C. preparations.

CONFORMAL FOOTWEAR COMPANY

Booth C-40

CONTINENTAL X-RAY CORPORATION

Booths A-18, A20

The Continental X-ray Corporation plans to feature two new developments along with their standard line of popular equipment at the Medical Convention this year. One new development is the electronic stylus orthodiagraphic attachment for fluoroscopes; the other is a 250 milliampere push button selection power unit, designed for simplicity of operation.

THE COOPERATIVE MEDICAL ADVERTISING BUREAU

Booth A-44

CORECO RESEARCH CORP.

Booth A-163

CORN PRODUCTS SALES CO.

Booths C-63, C-65

COUNCIL ON WHITE MINERAL OIL

Booth B-30

The Council on Mineral Oil will distribute an informative booklet, "What Physicians Say About Mineral Oil" and sample bottles of mineral oil at its booth. On exhibit will be photostats of Council advertisements in the Journal of the American Medical Association.

CURVLITE PRODUCTS, INC.

Booth B-122

CUTTER LABORATORIES

Booths C-163, C-165, C-167

On display in this exhibit will be the Cutter line of Intravenous Solutions in Safti-flasks with the latest expendable equipment for administration. The recent advances and additions to the blood fractions group of products will also be on display for your inspection.

DAVIES, ROSE AND COMPANY, LTD.

Booth C-67

The current Quinidine Sulfate situation, which has been a very perplexing problem during the past few years, will be explained by representatives in the Davies, Rose exhibit. Their Tablets of Quinidine Sulfate, alkaloidally standardized, which assures uniformity in dosage, will be featured.

F. A. DAVIS COMPANY

Booth B-112

Many of the newest and most talked about books will be on display at the F.A. Davis booth. Among them: ARTHRITIS, Bach; GALLBLADDER DISEASES, Behrend; HANDBOOK OF TREATMENT, Gruber; PERIPHERAL VASCULAR DISEASES, Kramer; PEDIATRIC PROGRESS, Litchfield-Dembo; MEDICAL DIAGNOSIS, Loewenberg; CLINICAL UROLOGY, McCrea; RHINOPLASTY, Maliniac; GONIOSCOPY, Troncoso; REPARATIVE SURGERY, May; RADIOLOGY, Pillmore; TREATMENT IN GENERAL MEDICINE, Reimann; DIAGNOSTIC SIGNS, Robertson; PRE-OPERATIVE AND POSTOPERATIVE CARE, Tourish and Wagner.

DAVIS & GECK, INC.

Booth A-35

Davis & Geck, Inc., manufacturers of sterile surgical sutures, will present an armamentaria of suture-needle combinations specifically prepared

for every type of surgery. Literature and technical information on sutures and wound healing will be available. This will include the D&G Manual, reprints and monographs as well as leaflets dealing with the development and improvement of D & G sutures.

DAVOL RUBBER COMPANY

Booths C-104, C-106

To this year's annual meeting of the A.M.A., the Davol Rubber Company will bring its newest medical specialties: First-Aid Tourniquet which clips instantly and holds fast; Urinal Bottle Cap and Connecting Drain Tube; two new types of T Tubes for biliary drainage; "Paris" water bottle with its air-cushioned surface --- and "Anti-Colic" brand Nurser with the "Anti-Colic" brand Nipple with an all-'round tab.

MRS. DAY'S IDEAL BABY SHOE COMPANY

Booth C-25

A vitit to MRS. DAY'S IDEAL BABY SHOE exhibit will reveal a complete line of baby shoes in choice materials. IDEALS take care of the baby through the four stages - crib, soft soles, intermediate soles and hard soles. Doctors are cordially invited to call at booth number C-25.

DENOYER-GEPPERT COMPANY

Booth A-181

Denoyer-Geppert Company, Educational Publishers, will display two life size anatomical oil paintings from a series of ten now in preparation, and two reproductions of these originals, just completed. Also on display will be a selection of the world famous anatomical models by Dr. Auzoux, France; prepared human skulls and bone preparations; and some of their own anatomical models and corrosion specimens.

THE DENVER CHEMICAL MFG. CO., INC.

Booth B-78

Exhibited here will be the Galatest for the instantaneous determination of urine sugar, and Acetone Test (Denco) for the detection of acetone in urine will be exhibited. You will be especially interested in a demonstration of these "spot tests" for sugar and acetone. Galatest and Acetone Test (Denco) offer advantages of accuracy, simplicity and economy in routine urinalysis.

DEPUY MANUFACTURING COMPANY

Booth B-158

DEVEREUX SCHOOLS

Booth C-61

Devereux Schools will acquaint physicians with their facilities for educating and treating children having academic or emotional difficulties. Twelve Devereux Schools in Pennsylvania and the Devereux Ranch School in California offer controlled environment and modern training, shaped to each child's needs. The residing psychiatrist, physician and psychologist, cooperate with the referring physician in his plans for the child's training and care.

DEVILBISS COMPANY

Booths C-105, C-107

Kodachrome transparencies edpicting the distribution of aerosols in the lungs and bronchi is a feature of the DeVilbiss Company exhibit. This data supports clinical investigations and experimental work with aerosols of penicillin, streptomycin, epinephrine, and other substances. Instruments for all types of spray application will be displayed.

DIAPHAGM & CHEMICAL COMPANY

Booth C-148

DICTOGRAPH PRODUCTS, INC.

Booth C-113

THE DIETENE COMPANY

Booth C-34

At the Dietene Company exhibit you will discover a really palatable high protein diet supplement--MERITENE. Dietene Reducing Supplement and the 1000 calorie Dietene Reducing Diet will also be featured. Both MERITENE and DIETENE are Council-Accepted. A complimentary, personal type diet service will be available to physicians.

DOAK COMPANY, INC.

Booth C-174 (East M)

DUKE LABORATORIES, INC.

Booth A-5

Duke Laboratories will exhibit Mediplast, elastic adhesive compress, wrapped individually and sterilized in conformity with regulations of the U.S. Food and Drug Administration; Elastoplast; Aquaphor; Basis Soap; Tecto; and Nivea--The Prescriber's Cosmetics.

E. I. DU PONT DE NEMOURS & CO., INC.

Booths C-96, C-98

Du Pont X-ray Films and Chemicals, "Patterson" X-ray Screens, and actual radiographs will be exhibited here. Of special interest to the photographic hobbyists will be "Defender" Films, Papers, and Chemicals. This new exhibit of the Du Pont Photo Products Department of E. I. du Pont de Nemours & Co., Inc. will be finished in black and gray.

DUREX PRODUCTS, INCORPORATED

Booth A-131

Contraceptive specialties by Durex will highlight this exhibit. Devices and unusual packagings never before shown at an A.M.A. Convention, including the Bow-Bend diaphragm (hinged rim) will be of particular interest. Complete contraceptive sets in the new compact and sanitary Duracase will be appreciated by the physician and patient alike. Latest clinical information on both Lactikol Jelly and Lactikol Creme will be available.

E & J MANUFACTURING COMPANY

Booth C-72

EASTMAN KODAK COMPANY

Booths B-47, B-49, B-51

Full-color Kodachrome transparencies and radiographs to illustrate the theme, "Picture the Patient's Progress"...with photograph after photograph...with radiograph after radiograph--will highlight the Eastman exhibit. The cases selected emphasize the value of a series of photographs of radiographs in depiciting the patient's progress. Instructive diagrams will be included. Supplementing the transparencies and radiographs will be displays of photographic and x-ray products.

EATON LABORATORIES, INC.

Booth A-133

Furacin Soluble Dressing and Furacin Solution, topical antibacterial preparations which possess a wide antibacterial spectrum without injuring tissue, will catch your interest at the Eaton exhibit. Other specialties to be displayed include, Loraphyn Suppositories and Loraphyn Jelly, contraceptives of proven clinical effectiveness, containing a powerful spermicide.

EDIN ELECTRONICS COMPANY

Booth A-37

THOMAS A. EDISON, INC.

Booth A-149

J. EDWARDS & COMPANY

Booth B-50

EISELE & COMPANY

Booth C-160

ELECTRO-PHYSICAL LABS. INC.

Booth A-75, A-77

ELECTRO SURGICAL APPLIANCE CORP.

Booth A-139

Among the new items to be shown for the first time by Electro Surgical Appliance Corp. will be a fully rectified and filtered ELECTRONIC SCALPEL of unusual cutting qualities. This Scalpel is non faradic and does not interfere with radio. Several new developments in Proctol Snares and dessication instruments will also be shown.

J. H. EMERSON COMPANY

Booth A-107

The LUNG IMMOBILIZING CHAMBER which provides complete bilateral lung rest without surgery or pneumothorax will be shown in the J.H. Emerson Company's display. Dramatic reports have shown that the very sick tuberculosis patients receive benefits by this new treatment.

ENCYCLOPAEDIA BRITANNICA, INC.

Booth C-32

ENDO PRODUCTS INC.

Booths B-161, B-163

Various Endo prescription and ampule specialties will be featured. Among the Council-accepted products shown will be Mesopin, selective gastro-intestinal antispasmodic; Estromone, for estrogenic therapy; Noradin Hydrochloride, psychomotor stimulant and anti-depressant. Samples and literature will be available for distribution.

ETHICON SUTURE LABORATORIES

Booths B-121, C-127

Ethicon Sterile Pack Sutures, a new metal suture storage canister containing tubed sutures, packaged sterile and ready for use, will be the feature of the exhibit Ethicon Suture Laboratories has prepared for the A.M.A. Chicago Meeting. By eliminating the necessity for washing tubes and buying suture jars, Ethicon Sterile Pack Sutures save the Hospital an estimated $10 per bed per year, and four nurse hours per 100 beds per week.

ETHIX CORPORATION

Booth B-33

In their initial exhibit, Ethix Corporation will present a series of distinguished formulas, each one supplying a specific need--all of them together forming an intergrated line of Hypo-Allergenic Cosmetic and Dermatological Preparations.

EUREKA X-RAY TUBE CORP.

Booth C-149

EVAPORATED MILK ASSOCIATION

Booth B-58

The Evaporated Milk Association will display publications dealing with the properties and uses of evaporated milk in infant feeding, child nutrition, maternal welfare, social welfare, public health, and general nutrition. These publications, available without charge, are designed for professional people, and for distribution to those whom they serve. Register at Booth B-58 for these useful and helpful materials.

EXERCYCLE CORPORATION

Booth C-26

So many physicians have bought Exercycle for their personal use that Exercycle for the first time is being exhibited at an A.M.A. Convention. Exercycle operated by motor automatically provides cycling, riding, rowing, or swimming action, either separately or in combination, with varying degrees of intensity ranging from passive (relaxed) to mild or active. Excellent also wherever controlled exercise is indicated.

EXPERT BEDDING COMPANY

Booth B-119

FANCEE FREE MFG. CO.

Booth C-102

Fancee Free, a simple little elastic garter belt that fits around the waist in back and below the abdomen in front to eliminate all pressure, will be presented in booth C-102. It is excellent for maternity patients or others who must avoid pressure or binding. Two snap on satin tabs transform the Fancee Free into a combination garter belt and sanitary belt ending all "Double Belt" trouble.

H. G. FISCHER & CO.

Booths A-158, A-160, A-162

Interest at the H. G. Fischer exhibit will center on their New DeLuxe "RF-200" X-Ray Unit. Full 200 milliampere capacity, automatic controls of advanced design, rugged construction and fine appearance, are some of its features. Their new FCC Type Approved diathermy units will be demonstrated.

FISHER-STEVENS SERVICE

Booth C-103

This exhibitor maintains a mailing list of all practicing physicians in the entire country. The list is used by pharmaceutical manufacturers to distribute literature and samples by mail. Stop at booth C-103 and learn more about the direct mail campaigns of the Fisher-Stevens Service.

C. B. FLEET CO., INC.

Booth A-33

Latest information on the increasing popularity of Phospho-Soda (Fleet), the pure, stable, aqueous concentrate of the two U.S.P. sodium phosphates, will be available at the C.B. Fleet exhibit.

FLINT, EATON & COMPANY

Booth C-171

Recent research on Choline has introduced new hope for the sufferer from early and late cirrhosis of the liver. An easy and acceptable way of administering Choline to your patients will be displayed at Flint Eaton's booth C-171. The product, Choline Dihydrogen Citrate (Flint), is extremely palatable. A very comprehensive digest covering the present status of Choline therapy will be available.

FLORIDA CITRUS COMMISSION

Booth A-151

FOLEY MANUFACTERING COMPANY

B-93

Facts about the Foley Food Mill and an interesting demonstration showing how it saves time and food for the homemaker in the preparation of fresh cooked vegetables and fruits for all smooth diets may be had in Booth B-93.

THE FOREGGER CO. INC.

Booth A-161

The Foregger Company will show equipment for Endotracheal Anesthesia including some newly developed items of interest to Surgeons as well as Anesthetists. Recent developments in Anesthesia equipment will also be on display including special equip-

ment for anesthetizing new-born Infants for the Blalock Operation, repair of cleft palate and similar procedures.

GAMMA INSTRUMENT CO., INC.
Booth C-64

GASTRO-PHOTOR LABORATORIES CORP.
Booth A-15

The new, $500, model of the Gastro-Photor -- "The Camera for Photographing the Interior of the Stomach" will be the item of interest here. With one exposure this Stomach Camera provides 16 gastrophotographs which make possible the diagnosing of ulcers hidden within rugal folds or in locations inaccessible to X-Ray observations. Samples of gastrophotographs will be displayed for first-hand observation.

GENERAL ELECTRIC COMPANY (LAMP DEPT.)
Booth A-24

The power of germicidal lamps to control mold growths and of infrared energy to penetrate human flesh will highlight the G-E Lamp exhibit. Portions of the live mold on various foods will be placed in a "germicidal shadow" to allow the mold to flourish. Physicians will be able to make a direct examination of the results; also to conduct on-the-spot measurements of the penetrating power of infrared radiant energy from heat lamps. Recording equipment will measure the penetration of the energy through human flesh independently of a subject's personal judgment.

GENERAL ELECTRIC X-RAY CORPORATION
Booths A-21, A-22, A-23, A-25

GENERAL FOODS CORPORATION
Booths A-143, A-145, C-120

GERBER PRODUCTS COMPANY
Booth B-111

GENCO SURGICAL MANUFACTURING CORP.
Booth C-74

THE B.F. GOODRICH COMPANY
Booth A-164

The Sundries Division of The B.F. Goodrich Company will show samples of its entire line of rubber and Koroseal surgical goods in an attractive booth. Featured will be the new line of deluxe hospital specialties and the new all color catalog.

GRADWOHL LABORATORIES
Booths B-8, B-10

This interesting exhibit will cover the activities of Gradwohl Laboratories--the making of laboratory reagents and Government licensed testing sera; training of laboratory technicians; and the publication of a journal devoted to laboratory subjects, called LABORATORY DIGEST. Special features will be the daily demonstration of Anti-Rh tests, a display of material for the Papanicolaou diagnosis of carcinoma, and special stains and technique for this work.

GRASS INSTRUMENT CO.
Booth A-179

GRUNE & STRATTON, INC.
Booths B-13, B-15

Outstanding among new publications for general practice and specialties to be displayed here include Neuhof: VENOUS THROMBOSIS AND PULMONARY EMBOLISM; Daley and Miller: PROGRESS IN CLINICAL MEDICINE; Barsky: ATLAS OF PLASTIC SURGERY; Fitzwilliams: CANCER OF THE BREAST; Hill and Dameshek: Rh FACTOR; Ponder: HEMOLYSIS; Spiegel (Editor): PROGRESS IN NEUROLOGY AND PSYCHIATRY VOLUME III; Wolberg: MEDICAL HYPNOSIS; Gellish: DEMENTIA PRAECOX. All periodicals of the British Medical Association will be available.

HAMILTON MANUFACTURING COMPANY
Booths B-63, B-65, B-67

Three suites of Examining Room Furniture will be displayed in the Hamilton exhibit: Deluxe Nu-Tone, the distinctive and modern Nu-Trend, and the professionally styled Steeltone. Also shown will be the No. 9905-B-AP All-Purpose Examining Chair Table, the No. 9902 Pediatric Table, the No. 9505 EENT Cabinet, and representative items of business office and reception room furniture.

HANOVIA CHEMICAL & MFG. COMPANY
Booths B-9, B-11

Modern ultraviolet self-lighting quartz lamps for artificial and body radiation, as well as Sollux Radiant Heat Lamps, jacketed type quartz germicidal lamps for operating rooms, nurseries and isolation wards and black light for diagnostic purposes will be on display in the Hanovia exhibit. Competent and courteous representatives will be at your disposal.

THE HARROWER LABORATORY
Booths A-27, A-29

H. J. HEINZ COMPANY
Booths C-97, C-99

PAUL B. HOEBER, INC.
Booth B-1

PAUL B. HOEBER, Inc., Medical Book Department of Harper & Brothers, will display advance proofs of two significant new books, Coley's NEOPLASMS OF BONE and Kaplan's RADIATION THERAPY. A complete line of distinguished titles, including the new 2nd Edition of Ridley & Sorsby's MODERN TRENDS IN OPHTHALMOLOGY and the new MacKenna's MODERN TRENDS IN DERMATOLOGY will also be available for inspection.

HOFFMANN-LAROCHE, INC.
Booth B-20

The Roche exhibit will be devoted exclusively to the council-accepted specialty, PROSTIGMIN. The many recognized uses of PROSTIGMIN are always of interest to physicians who are invited to stop at booth B-20. A staff of experienced representatives will be pleased to discuss PROSTIGMIN and other Roche specialties of interest to them.

HOLLAND RANTOS COMPANY, INC.
Booth A-73

KORONEX JELLY and KORONEX CREAM will be featured here. You may recall it was the Holland-Rantos Company, Inc., that "pioneered" the introduction of modern contraceptive technique frequently referred to as the Koromex Method. The medical background and clinical use of KORONEX JELLY dates back to 1925. Medical service representatives will be on hand to discuss the latest data on KORONEX JELLY and CREAM.

HOLLISTER-STIER LABORATORIES
Booth B-29

The spotlight at the Hollister-Stier booth will be on the beautiful plastic case accommodating the new and improved dropper vial for diagnostic allergens. Improved diagnostics are in the making, too. The complete and personalized allergy service of a pioneer and "specialist" in allergy - Hollister-Stier Laboratories - will be of interest to all physicians.

HOSPITAL LIQUIDS, INC.
Booth B-90

RICHARD HUDNUT
Booths A-118, A-120

THE HYGEIA NURSING BOTTLE CO.
Booth A-122

The new, improved Hygeia Nursing Bottle with extra capacity over 8 and 9 ounces will draw interest at booth A-122. Learn why prescribing the Hygeia Unit - including nipple, bottle, and glass cap - will help mothers and hospitals overcome their feeding problems. A trained representative will be in attendance.

HYGEIA, THE HEALTH MAGAZINE
Booths A-64, A-65

In the HYGEIA booth, you will find a pictorial representation of editorial contributors, the processes of editing, the methods used for screening and approving advertising and the various types of readers who benefit from this health magazine. Also presented in a series of sequence lighted color transparencies showing how HYGEIA's health information is used by professional, educational, and family groups.

ILLE ELECTRIC CORPORATIONS
Booth C-125

Ille Electric Corporation will demonstrate how the care of infantile paralysis, arthritis, and other disabling conditions, can be greatly improved by the use of Hydromassage Subaqua Therapy Tanks. They will also display an improved Mobile Whirlpool Bath with New Mobile Adjustable High Chair.

INHALATIONAL EQUIPMENT COMPANY, INC.
Booth A-165

Special attention is expected to focus on the Inhalational Equipment display. The exhibit will present the mechanics of Aerosol Therapy in the treatment of chronic and acute lung and sinus infections. Included will be a variety of methods of administering Aerosol Therapy, utilizing the Council-accepted I.E.C. Nebulizer as the basic unit, together with accessory equipment as a means of Aerosol administration.

INTERCHEMICAL CORPORATION - BIOCHEMICAL DIVISION
Booth A-127

The Biochemical Division will feature its modified protein hydrolysate, "ELAMINE Lyophilized," which has been specifically designed for intravenous amino-acid therapy. Visitors to the booth will have an opportunity to visualize several important steps in the manufacture of ELAMINE, particularly those dealing with the method of "freeze-drying." Representatives will be present to discuss parenteral alimentation.

INTERNATIONAL VITAMIN CORPORATION
Booths B-16, B-18

At the I.V.C. Booth there will be a full array of Council-accepted vitamin products. An especially interesting Vitamin "A" configuration will be shown in color transparency. Well-trained representatives and an M.D. will be in attendance at all times to describe and explain the uses of I.V.C. products.

IODINE EDUCATIONAL BUREAU, INC.
Booth B-85

JANEIL SHOP FOR HANDICAPPED GIRLS
Booth C-38

Here will be displayed pictures and charts of the various departments and activities of Spalding School for Handicapped Children, one of the largest and finest public schools of its kind in the world. Janeil Shop, a Sheltered Work Shop at Spalding, trains badly handicapped girls to sew. Their products, which are sold for their benefit, will be on display in Booth C-38. Guests will be welcome.

JOHNSON AND JOHNSON
Booths A-26, A-28

Hemo-Pak Hemostatic Absorbable Surgical Dressings will be the main feature in the Johnson and Johnson display of latest developments in surgical dressings.

JONES METABOLISM EQUIPMENT COMPANY
Booth C-157

A feature of the Jones Metabolism Equipment exhibit will be the JONES SUPER-MOTOR-BASAL, with its exclusive feature "Two Machines In One" -- a standard-size unit for average cases built into a double-size unit for convenient handling of all extreme cases. Technicians of many years' experience will be available for answering all questions on metabolism testing.

JORDAN PUMP COMPANY
Booth A-153

The Jordan Pump Company, for the past eighteen years builders of small, efficient, and inexpensive pressure and vacuum Units, will show vacuum and pressure Units and various other items adaptable to the medical and surgical fields. Two Units are especially adaptable to the use of Penicillin Inhalation Therapy.

"JUNKET" BRAND FOODS
Booths B-106, B-108

The importance of rennet in infant and adult nutrition and the value of rennet desserts in both normal and restricted diets will be explained here. Enlarged photos illustrate the action of the rennet enzyme in producing softer, finer, more readily-digestible milk curds. Authoritative literature describing dietary applications of rennet products and complimentary packages of "Junket" Rennet Powder and "Junket" Rennet Tablets will be available.

KANSAS CITY ASSEMBLAGE COMPANY
Booth C-100

The new and improved Padgett-Hood Dermatome, exhibited for the first time at an American Medical Association Convention, will feature an aluminum drum which gives increased lifting power, retains nearly all cement on the drum when skin is stripped from drum, automatically aligns the knife edge with the drum surface, and sets the knife edge to register with the scale.

THE KELLEY KOETT MANUFACTURING CO.
Booths A-62, A-64, A-66, A-68

Some new and interesting developments in X-ray equipment may be seen in the Kelley-Koett booth. These include a new 300 MA Generator and Control finished in beautiful Kolobote, designed to cover the entire range of radiographic and fluoroscopic requirements; and a new, inexpensive Pediatrician's Fluoroscopic Table, designed under the direction of a Pediatrician, to meet all Pediatric X-ray requirements.

KEYSTONE VIEW COMPANY
Booth A-55

Keystone will exhibit a new Telebinocular and Ortho-Trainer for use of transparencies, together with the Occupational Visual Service for industrial vision testing; Overhead Projector for 3¼ x 4 inch slides, 2 x 2 inch transparencies, and etched glass plates; home training material for use in all types of visual discomfort; and a new technique in squint training with the Keystone Stereo-Motivator.

KIDDE MANUFACTURING CO., INC.
Booths C-101, C-103

Two distinct features will comprise this exhibit: a display of the new *Kidde* Utero Tubal Insufflator with GASOMETER pressure control, providing diagnostic and therapeutic use of Carbon-Dioxide or opaque oil; and the increasingly popular *Kidde* Dry Ice Apparatus for use in the treatment of superficial skin lesions.

H.W. KINNEY AND SONS

Booths C-109, C-111

LAKESIDE LABORATORIES, INC.

Booth A-183

LANTEEN MEDICAL LABORATORIES

Booth C-80

The Lanteen exhibit will employ a new landscape photo mural background which has received many fine comments and compliments at recent medical meetings. Visiting physicians will find it worthwhile to see this attractive exhibit.

LEA & FEBIGER

Booth B-19

The Lea & Febiger exhibit will be of particular interest because of such outstanding new books and new editions as Ormsby and Montgomery--DISEASES OF THE SKIN; Frohman--BRIEF PSYCHOTHERAPY; Gray--ANATOMY OF THE HUMAN BODY; Buchanan--FUNCTIONAL NEURO-ANATOMY; Partipilo--SURGICAL TECHNIQUE AND PRINCIPLES OF OPERATIVE SURGERY; Krimsky--BINOCULAR IMBALANCE; Kraines--THE NEUROSES AND PSYCHOSES; Spaeth--OPHTHALMIC SURGERY; Ballenger--DISEASES OF THE NOSE, THROAT AND EAR; Lewin--THE FOOT AND ANKLE and many others.

LEDERLE LABORATORIES

DIVISION AMERICAN CYNAMID COMPANY

Booths C-119, C-121, C-123

The Lederle exhibit, devoted entirely to Council-accepted products, will merit the thoughtful attention of every physician. Trained individuals will be available to assist the visiting physician in every way possible regarding the field of biologicals, pharmaceuticals, and diagnostic procedures.

LIBBY, MCNEILL & LIBBY

Booth A-150

The advantages of the Libby Strained and Homogenized Foods will be described in the Libby, McNeill & Libby booth. Discussions pertaining to the dietary management of infants and older babies will be welcomed.

THE LIEBEL-FLARSHEIM COMPANY

Booth A-71

The special features of the Liebel-Flarsheim exhibit will be a display and demonstration of their latest model diathermy and Bovie electrosurgical equipment. Capable representatives will be on hand at all times to answer your questions about physical therapy and electrosurgical apparatus. Plan to inspect the interesting features of this exhibit.

ELI LILLY AND COMPANY

Booths B-40, B-42, B-44

LINCOLN LABORATORIES

Booth A-135

THE LINDE AIR PRODUCTS COMPANY

Booths B-141, B-143

A growth chart representing the thirty year rise of oxygen therapy importance in medicine will be featured here. Factors causing this rapid growth will be clearly shown. Supplementing the chart, Linde oxygen and oxygen therapy equipment will be exhibited, and the Beckman magnetic oxygen analyser will be demonstrated. Special representatives will welcome your consultation on problems of oxygen and oxygen therapy apparatus.

J. B. LIPPINCOTT COMPANY

Booths C-1, C-3, C-5

J.B. Lippincott Company will present their Selected Professional Books, by outstanding authors. The 'pulse of practice,' gauged constantly by Lippincott, centers in an advisory board of active clinicians who constantly review the current and coming trends. Due to this publishing policy, more doctors look to Lippincott for timely, practical, dependable information of authority in all fields of medicine, surgery, dentistry, nursing and pharmacy.

LUZIER'S, INC.

Booth B-38

M & R DIETETIC LABORATORIES, INC.

Booth B-52

Similac, a food for infants during the all-important first year of life, will be displayed in booth B-52. Representatives will be in constant attendance and will welcome the opportunity to discuss the merits and suggested applications of the product in the feeding of the normal infant, as well as the infant requiring an individualized formula.

MACALASTER BICKNELL COMPANY

Booth A-85

MACHLETT LABORATORIES, INC.

Booth B-174

THE MACMILLAN COMPANY

Booth A-69

PSYCHIATRY IN A TROUBLED WORLD, a new book by Dr. William C. Menninger of the Menninger Foundation, will be offered by Macmillan. "Yesterday's war" from the psychiatric standpoint and "today's challenge"—a plea for application of psychiatric measures to present perplexing problems—is discussed. GLOMERULAR NEPHRITIS (Macmillan), containing Dr. Thomas Addis' method of diagnosing and treating Bright's Disease will interest the General Practitioner.

THE MAICO COMPANY, INC.

Booths C-84, C-86

MALLINCKRODT CHEMICAL WORKS

Booth C-138

THE MALTINE COMPANY

Booth C-50

MANHATTAN UNIFORM COMPANY

Booth C-166

The various types of professional garments for the office or the hospital will be on display in the Manhattan Uniform exhibit, or illustrated in their catalogue. These uniforms which are tailored-to-measure may be ordered in any of fifteen (15) materials including rayon. Sample swatches will be available.

MARCELLE COSMETICS

Booth B-56

The growing interest in Allergy will make the exhibit of Marcelle Hypo-Allergenic Cosmetics particularly attractive to all visitors. The fact that Marcelle formulas omit all known allergens, highly recommends these cosmetics for all persons with sensitive skins, or those with allergy problems--or as a precautionary measure. Sample cosmetics and formularies will be available to allergists, dermatologists, or all physicians.

THE S.E. MASSENGILL COMPANY

Booth C-156 (west ½)

F. MATTERN MFG. CO.

Booths A-41, A-43, A-45, A-47

A visit to the MATTERN Booths will enable you to personally examine the very latest and most modern line of Mattern X-Ray Apparatus to satisfy your every need. Qualified personnel will be pleased to answer your questions.

MCFEDRIES X-RAY COMPANY

Booth C-169

MCKESSON APPLIANCE COMPANY

Booths C-120, C-122

McKESSON & ROBBINS, INC.

Booths B-164, B-166

A display of accepted vitamin products and historical data showing development of the House of McKesson since 1833 will be featured here. Some of the modern laboratory procedures will be demonstrated.

MCNEIL LABORATORES, INC.

Booth A-140

MEAD JOHNSON & COMPANY

Booths B-175, B-177, C-41, C-43

Because of the increasing interest in therapeutic effects of protein, Mead Johnson & Company will devote booths C-41 and C-42 to some of the newer aspects of the subjects. Among the products to be displayed, in connection, are: Amigen, Protolysate, Nutramigen, Alacta, Casec, and Protenum. In booths B-175 and B-177, Dextri-Maltose will be featured. The use of cow's milk, water, and carbohydrate mixtures represents a system of infant feeding that consistently, for over three decades, has received universal pediatric recognition. No carbohydrate employed in this system of infant feeding enjoys so rich and enduring a background of authoritative clinical experience as Dextri-Maltose.

THE MEDICAL BUREAU

Booth C-18

In Booth C-18, the Medical Bureau, an organization serving as counselors in problems of medical and hospital personnel, will offer its facilities. Recommendations can be made of Diplomates of the American Boards, younger physicians interested in further training or assistantships, general practitioners, administrators, supervising and staff nurses, scientists, laboratory technicians, dietitians, and social workers.

MEDICAL CASE HISTORY BUREAU

Booth B-14

Exhibited here will be an inexpensive case history system which shows at a glance the complete history, development, and treatment. Of special interest is the unique method by which cases may be cross-indexed according to the disease directly upon the patient's history chart. Representatives in the booth will gladly demonstrate how these records are actually kept in the files.

MEDICAL FABRICS, INC.

Booth C-112

MEDICAL FILM GUILD

Booth A-97

MEDICAL MAILING SERVICE, INC.

Booth A-31

THE MEDICAL PROTECTIVE COMPANY

Booth B-52

The Medical Protective representatives will be at your service in booth B-52 to present their protection plan, and to explain the peculiar relations of the doctor to the law which governs your practice, or to discuss any particular phase of professional liability in which you are especially interested.

THE MENNEN COMPANY

Booth B-53

The Mennen Company will exhibit their two baby products - Mennen Baby Oil and Mennen Baby Powder. The Baby Oil is now being used routinely by the majority of hospitals that are important in maternity work.

MERCK & COMPANY, INC.

Booths C-21, C-23

THE WM.S. MERRELL COMPANY

Booth B-73

METRO-TEC COMPANY

Booth C-130

THE WM. MEYER CO.

Booth C-118

MICROTONE COMPANY

Booths A-78, A-80

THE C. V. MOSBY COMPANY

Booths C-6, C-4

A wealth of new and timely medical literature will be available for examination at the Mosby exhibit. Some of the very new releases to be shown will include Crossen OPERATIVE GYNECOLOGY, Pottenger TUBERCULOSIS, Gradwohl CLINICAL LABORATORY METHODS AND DIAGNOSIS, Dunbar SYNOPSIS OF PSYCHOSOMATIC DIAGNOSIS AND TREATMENT, Watson HERNIA, Willis PATHOLOGY OF TUMOURS, Ilgenfritz PREOPERATIVE AND POSTOPERATIVE CARE, Muncie PSYCHOBIOLOGY AND PSYCHIATRY, Mettler NEUROANATOMY, and the BRITISH SURGICAL PRACTICE.

MOTHERS' AID OF THE CHICAGO LYING-IN HOSPITAL

Booth C-38

The Mothers' Aid, an auxiliary of Chicago Lying-in Hospital, will present two renowned publications - Our Baby's First Seven Years' record book* gift for the mother and scrap book for the toddler. Their sale supports medical research to benefit mothers the world over. Available to hospitals for patients, gift shops and auxiliary earning funds.
* 20th printing - 700,000 copies sold.

V. MUELLER & COMPANY

Booths B-125, B-126, B-127, B-128

Two separate sections of the V. Mueller & Company exhibit will facilitate your inspection of the newest surgical equipment. One section will be devoted entirely to the latest in fine furniture and office equipment. Across the aisle, two additional booths will display interesting new instruments, both standard and special, for all several fields of surgery.

NATIONAL ASSOCIATION OF MARGARINE MANUFACTURERS

Booth B-110

Information on margarine, its ingredients and manufacture, and its role in sound nutrition may be found in Booth B-110. The National Association of Margarine Manufacturers invites your questions and views on the place of margarine in the diet. Current margarine literature and taste samples of margarine are available gratis.

NATIONAL DAIRY COUNCIL

Booth C-48

"Food Makes a Difference," with emphasis on "Well-Fed Mothers ... Healthier Babies," will dramatize the National Dairy Council booth. The influence of diet during pregnancy upon the physical condition of the infant at birth, as shown by studies of the Department of Maternal and Child Health, Harvard School of Public Health, will be of special interest. Reprints interpreting the study will be available at the booth.

V 13
1948

NATIONAL DAIRY PRODUCTS COMPANY, INC.

Booth C-114

Formulac infant food, a concentrated milk containing all the vitamins and minerals considered essential, will be featured in this exhibit. Since its introduction two years ago, Formulac has developed to the point where today it is generally accepted as a flexible, protective formula preparation. Representatives will be glad to explain its properties and to make it available at your hospital.

NATIONAL DRUG COMPANY

Booths C-152, C-154

THE NATIONAL ELECTRIC INSTRUMENT CO., INC.

Booth B-12

The National Electric Instrument Co., Inc., manufacturers of famous "National" illuminated diagnostic and cautery equipment, has completed extensive plans for demonstrating the uses of various surgical and ophthalmic products of interest to all specialists and general practitioners. Spotlighted for top interest is the new National Quaddisc Ophthalmoscope with instantly variable apertures and color filters.

NATIONAL INSTITUTE OF DIAPER SERVICES, INC.

Booth A-161

It does make a difference what diaper service a doctor recommends, says the NIDS whose exhibit may be seen here. Members now serve 150 metropolitan areas, and are the only diaper "service" operating under a compulsory national laboratory control which assures physicians that their diapers are safe. There is such a thing as a "prescription diaper service." Look for the NIDS Safety Seal, and stop at Booth A-161 for a bank to take home to the kiddies.

NATIONAL LIVE STOCK AND MEAT BOARD

Booth C-44

THOMAS NELSON & SONS

Booth A-14

Thomas Nelson and Sons will show advance proofs of the first of a new line of bound books - VIRUS DISEASES OF MAN, Second Edition, by C. E. van Rooyen and A. J. Rhodes, of the University of Toronto. Thomas Nelson and Sons are publishing this completely revised and enlarged edition as a result of insistent demand. The regular line of loose-leaf publications will also be displayed.

NESTLE'S MILK PRODUCTS, INC.

Booth B-149

For your relaxation the Nestle Company cordially invites you to enjoy a delicious hot cup of Nescafe. And, for your information, especially qualified representatives will be on hand to answer your questions on any of Nestle's milk products - used for babies 'round the world. New pieces of valuable professional literature will be available.

NORTH AMERICAN PHILIPS CO., INC.

Booths A-113, A-115

NOVOCOL CHEMICAL MFG. CO., INC.

Booth C-100

MONOCAINE HCl and MONOCAINE FORMATE, widely used, potent anesthetics, the latter for spinal anesthesia, will be displayed in the Novocol Chemical Manufacturing Company booth. The convenient and economical ANESTUBE (cartridge) system will be gladly demonstrated by competent representatives.

OBRIG LABORATORIES, INC.

Booth A-147

A feature of the exhibit of Obrig Laboratories, pioneer in the manufacture of plastic contact lenses, will be an automatic slide film showing the use of contact lenses in various eye conditions.

THE OHIO CHEMICAL & MFG. CO.

Booths A-119, A-121, A-123, A-125

LYDIA O'LEARY, INC.

Booth C-170

ORTHO PHARMACEUTICAL CORPORATION

Booth B-173

Featured here will be the well-known line of Ortho specialties for the control of conception, including Ortho-Gynol, Ortho-Creme and Ortho Diaphragms as well as Ortho Sets. Ortho Professional Service Representatives will be on hand to discuss these items with you at your convenience.

ORTHOMATIC MATTRESS COMPANY

Booth C-144

On display here will be the new Air Foam Mattress, a recent development of Orthomatic Mattress Company. Its porous construction, anatomically correct 'cushioning,' flexibility, etc., make it particularly beneficial in bone cases, low back conditions, etc. Additional information will be available at Booth C-144.

ORTHOPEDIC FRAME COMPANY

Booths C-150, C-160

The Orthopedic Frame Company will announce a new and important tool for the Orthopedic Surgeon - the Stryker Oscillating Bone Saw. On display will also be found an instrument with many possibilities for the Orthopedic Surgeon. The oscillating blade makes rapid, safe cuts in bone. The oscillating motion makes possible a variety of cuts not possible with a circular saw.

OXFORD UNIVERSITY PRESS, INC.

Booth B-124

A visit to Oxford's complete showing of new books by American authors will be worth your while. Important titles include DETAILED ATLAS OF THE HEAD AND NECK, by Truex and Kellner; JAUNDICE, ITS PATHOGENESIS AND DIFFERENTIAL DIAGNOSIS, by Hewitt; SYMPOSIUM ON ENDOCRINOLOGY OF NEOPLASTIC DISEASES, edited by Twombly and Pack; HODGKIN'S DISEASE AND ALLIED DISORDERS, by Jackson and Parker; MODERN TREATMENT OF PEPTIC ULCER, by Windelstein; HEADACHE AND OTHER HEAD PAIN, by Wolff; TREATISE ON SURGICAL INFECTIONS, by Meleney; DIABETES AND ITS TREATMENT, by Barach.

THE G. H. PACKWOOD MFG. CO.

Booth C-30

The G. H. Packwood Manufacturing Company will again present it nationally distributed PAXLANOSAV HEAVY DUTY Granulated Skin Cleanser. This PAX Skin Cleanser contains exclusive PAXLANOSAV BLENDED EMOLLIENT combining over 3% anhydrous USP lanolin plus additional percentages of other fine emollient oils. PAXLANOSAV HEAVY DUTY quickly develops exceptionally profuse lather, remains free flowing, and can be used in good commercial granulated or powdered soap dispensers.

PARAVOX, INC.

Booth C-42

The newest Paravox Hearing Aids, including new adaptations of printed circuits will be on display here. Background display will feature pictorially the "usual HEARzone". Included in the exhibit will be samples of internal-type plastic chassis, the new magnetic receiver, and several printed circuit panels, also a new type of 100 hour, carbon-zinc "A" battery.

PARKE, DAVIS & COMPANY

Booths B-168, B-170, B-172

THE E. L. PATCH COMPANY

Booths C-14, C-16

To any physician concerned with the treatment of functional constipation, The E. L. Patch exhibit will hold a special attraction. On display will be the three types of Kondremul—Plain, with Cascara, and with Phenophthalein. You won't want to miss this interesting exhibit.

PEERLESS X-RAY LABS. AND MFG. CORP.

Booths B-86, B-88

THE PELTON AND CRANE COMPANY

Booths C-11, C-13

PENICILLIN MACHINE CO.

Booth C-66

PERKIN-ELMER CORPORATION

Booth B-117

MURLE PERRY

Booth B-46

A Colostomy and Ileostomy Appliance of unusual design will be exhibited by Murle Perry. Made of 1/8" clear plastic in several sizes and models with interchangeable inserts which enable proper fitting of all stomas, regardless of location. Latest model separates like two saucers for thorough and easy cleaning. Cellulose pad adds to comfort.

PET MILK SALES CORPORATION

Booths B-41, B-43, B-45

An actual working model of a milk condensing plant in miniature will be exhibited by the Pet Milk Company. This exhibit offers an opportunity to obtain information about the production of Pet Milk, its use in infant feeding, and the time-saving Pet Milk services available to physicians. Miniature Pet Milk cans will be given to the physicians who visit the Pet Milk booth.

PETRA MANUFACTURING COMPANY

Booth C-110

Petra Manufacturing Company will exhibit a complete line of attractive, protective KOROSEAL Plastic Aprons for the doctor, surgeon, nurse, and office assistant, also utility covers, pillow cases, mattress covers, and yard goods. KOROSEAL is water repellent, acid, liquid, dust, dirt, and chemical resistant: Garments are easy to clean; a whisk of a damp cloth will wipe off any accumulations on the material.

PHILIP MORRIS & COMPANY

Booths A-52, B-39

Philip Morris & Company will demonstrate the method by which it was found that Philip Morris Cigarettes, in which diethylene glycol is used as the hygroscopic agent, are less irritating than other cigarettes. Their representatives will be happy to discuss researches on this subject and problems on the physiological effects of smoking.

PICKER X-RAY CORPORATION

Booths A-124, A-126, A-128, A-130

The Picker X-Ray Corporation will exhibit the Series '200' motor drive tilt table equipped with a spot film device; the Fully Automatic Electronic V-7 Vertical Control; a 100 MA motor drive Century unit; new type 15 MA Mobile unit; a complete line of accessory items including the new ANHYDRATOR for drying films without heat; the underwriter-approved EXPLOSION-PROOF ILLUMINATOR; and the new Weisman GYNOGRAPH.

THE GEORGE P. PILLING & SON CO.

Booths B-59, B-61

The Pilling exhibit will offer an extensive line of fine surgical instruments, both for general use and for many specialized applications. Bronchoesophagologists will be especially interested in the new Broncalloy instruments, made in Pilling's outstanding new stainless metal, developed especially for the bronchoscopic field. Many new instruments for use in otorhinolaryngology, thoracic surgery, and other special fields will also be exhibited.

PITMAN-MOORE CO.

Booth B-92

Among other products, Pitman-Moore will feature the dosage form of sulfadiazine most recently accepted by the Council on Pharmacy and Chemistry. Known as Magmoid Sulfadiazine, this is a smooth, creamy, orange-flavored liquid, containing in each average teaspoonful 0.5 Gm. (7.7 grs.) of sulfadiazine. Also featured will be the new Ultraviolet Irradiation Killed Rabies Vaccine, a product of considerably more potency than vaccines killed by ordinary methods.

PREMO PHARMACEUTICAL LABORATORIES, INC.

Booth A-57

W. F. PRIOR COMPANY

Booth A-19

Of special interest at the Prior exhibit will be their LOOSE-LEAF Publications: Tice's MEDICINE, Lewis-Walter's SURGERY, Brennemann-McQuarrie PEDIATRICS, and Davis' GYNECOLOGY AND OBSTETRICS. During 1947 approximately 2900 New and Revised pages of these reference works were sent to subscribers to bring them up-to-date. In 1948 several hundred new pages will be furnished to owners of these sets, including an entirely new volume for Tice's Medicine on Gastrointestinal Diseases.

THE PROCTER & GAMBLE COMPANY

Booths B-81, B-83

The Procter and Gamble Company will offer four time-saving leaflet pads for doctors: "Instructions For Routine Care of Acne," "Instructions For Bathing a Patient in Bed," "Instructions For Bathing Your Baby," and "The Hygiene of Pregnancy" all designed to answer patients' questions on routine care.

PROFESSIONAL BUDGET PLAN

Booth A-49

PROFESSIONAL EQUIPMENT COMPANY

Booth A-116

The exhibit of the Professional Equipment Company will feature the first showing of a new Vertical Fluoroscopy Attachment recently developed for the Profexray Table Combination Radiographic and Fluoroscopic Unit. This attachment synchronizes the travel of the screen and powerhead, both vertically and horizontally, with the patient standing or seated at the end of the table. Other Profexray Units which will be exhibited include the Vertical Combination, the Mobile and Portable Units.

THE PROMETHEUS ELECTRIC CORP.

Booth B-142

PURITAN COMPRESSED GAS CORP.

Booth C-40

Puritan Compressed Gas Corporation will be represented with a completely new convention exhibit featuring, among their full line of medical gases and gas therapy equipment, a display of authentic photographs showing actual installations of some of the latest PURITAN equipment. Representatives will welcome your visit.

137
48

THE PYRAMID RUBBER COMPANY

Booth A-155

By means of a new device that simulates actual nursing, the Evenflo exhibit will show how the air pressure in the Evenflo Nurser is kept constant. The air, admitted thru the pin hole valves in the Evenflo Nipple, bubbles thru the formula to relieve the vacuum as the milk is withdrawn. By adjusting the Evenflo Cap the rate of flow is altered to suit the individual infant.

RADIUM CHEMICAL COMPANY, INC.

Booth C-45

Facts about Radium and Radon Applicators and Accessories for the treatment of cancer and allied diseases will be given here. In addition to their complete line, the NEW MONEL RADIUM APPLICATOR, designed by the Radium Chemical Company, Inc. in accordance with specifications of otologists, will also be displayed.

THE RADIUM EMANATION CORPORATION

Booth A-92

The Radium Emanation Corporation will exhibit a wide variety of instruments and applicators used in modern Radium Therapy, including permanent and removable LEAK-PROOF radon seeds. A well-informed representative will be available to explain the equipment and its usage.

RARE CHEMICALS, INC.

Booths C-159, C-161

Male hormone preparations--Testosterone Propionate "Rare" for parenteral use and Methyl Testosterone "Rare" for oral use--will be the main feature of this exhibit. Other products to be included: Dienestrol "Rare" (new synthetic estrogen), Acidolate (liquid detergent), Dermolate (cake detergent), Gitalin (cardiac glycoside), and Salysal (salicylate which requires no alkali).

RAYTHEON MANUFACTURING COMPANY

Booth C-142

Latest console and portable models of the Microtherm, a microwave (radar) diathermy generator, will be exhibited. This equipment, the result of advanced technical research, provides a new medical tool. Microwaves and their special characteristics which make them particularly suitable for deep heating of the human body will be explained; and the new techniques of microwave therapy, demonstrated.

REED AND CARNRICK

Booth B-48

The Reed & Carnrick Institute for Medical Research will have an interesting display of Estrogenic Substances, R & C; Meprane Dipropionate (brand of Promethestrol dipropionate); orally potent synthetic estrogen; and Solution Thiamine Hydrochloride, R & C.

REXAIR DIVISION

Booth B-76

RITTER COMPANY, INC.

Booths A-110, A-112

WILLIAM H. RORER, INC.

Booth C-166

Carfusin "Rorer," Council-Accepted brand of Carbol-Fuchsin Paint, also known as Castellani's Paint will be the focal point of attention in Rorer's exhibit. The successful treatment of "Athletes Foot" and other fungus infections with Carfusin "Rorer" will be particularly featured. Various other Council-Accepted Rorer products, including Mannitol Hexanitrate, Diethylstilbestrol, Thiouracil, and other modern therapeutic aids, will be displayed.

ROYAL METAL MANUFACTURING CO.

Booth C-132

The very latest in reception room furniture will be shown by Royal Metal Manufacturing Company, makers of Royalchrome Furniture. Royalchrome will stress the fact that you can completely furnish your office with correlated furniture of the same type and beauty.

SAFETY GAS MACHINE CO., INC.

Booth A-12

SANBORN COMPANY

Booth B-21

SANDOZ CHEMICAL WORKS, INC.

Booths B-160, B-162

W.B. SAUNDERS COMPANY

Booths B-2, B-4, B-6

SCHENLEY LABORATORIES, INC.

Booth B-22

Penicillin will highlight the Schenley Laboratories, Inc. exhibit. Their comprehensive line of Penicillin products including Penicillin Tablets, Penicillin Troches, Penicillin Ointment, Penicillin Ophthalmic Ointment, etc., will be featured; and well-informed personnel will be in attendance.

SCHERING CORPORATION

Booth A-39

Schering Corporation, the world's largest manufacturer of hormones, will feature Estinyl (ethinyl estradiol) the most potent oral estrogen in clinical use today. Neo-Iopax, a safe urographic radiopaque medium, and Priodax, a standard cholecystographic medium will also be displayed. Members of the Medical and Professional Service Staffs of Schering will be present to welcome inquiries on these important Council-Accepted Preparations.

SCHIEFFELIN & CO.

Booth C-77

Schieffelin BENZESTROL, a non-stilbene synthetic estrogen developed in the research laboratories of Schieffelin & Co. will be featured. A qualified staff will be in attendance to explain the advantages of this product, and to answer questions with regard to other Schieffelin specialties.

JULIUS SCHMID, INC.

Booth C-116

Here physicians may view reproductions in color showing how, after examination of the patient, their prescription for the correct size RAMSES Prescription Packet #501 will supply the patient optimum protection with simplicity in use. Representatives will be on hand to answer questions regarding RAMSES Flexible Cushioned Diaphragm, RAMSES Diaphragm Introducer, RAMSES Vaginal Jelly, RAMSES Vaginal Applicator, and RAMSES Fitting Rings.

G. D. SEARLE & CO.

Booths A-56, B-57

At the Searle booths a large number of anatomic and pathologic subjects will be exhibited in colored translites, colored slides, and plastic models. They will illustrate such various conditions as congestive heart failure, bronchial asthma, hay fever, colitis, amebiasis, active rheumatoid arthritis, etc. Featured products of Searle Research will be Aminophyllin, Metamucil, Diodoquin, and Gold Sodium Thiosulfate.

SHAMPAINE COMPANY

Booths A-176, A-178

The Shampaine exhibit will feature the Perfection Major Operating Table, which is completely head-end controlled; the famous Martin All-Purpose Chair-Table; and a complete line of physicians' steel furniture, as well as upholstered reception room furniture. Factory trained representatives will be in attendance to discuss equipment problems with the doctors.

SHARP & DOHME, INC.

Booths C-69, C-71, C-73

Items of special interest at this exhibit include: Blood Group Specific Substances A and B for conditioning group O blood to neutralize the anti-A and anti-B isoagglutinins; a new dosage of 'Delvinal' Sodium Vinbarbital for the production of obstetric amnesia and analgesia; 'Cresatin' Ointment for the treatment of common mycotic skin infections; and new antibiotic preparations including Tyrothricin along with 'Sulfathalidine' and 'Sulfasuxidine', intestinal bacteriostatic agents.

SHAY MEDICAL AGENCY

Booth B-23

For those interested in securing better appointments or seeking a different location, the Shay Medical Agency will have available a list of openings in Industry, Private Practice, Group Clinics, Public Health Organizations, Hospitals and Institutions, Universities and Medical Schools. You are invited to avail yourself of their services and to consult with them on problems of personnel.

THE SHEPARD ELEVATOR COMPANY

Booth B-178

In the Shepard Elevator exhibit may be seen a novel demonstration of an actual full-size HomeLIFT Residence Elevator in operation. Visitors will have the opportunity of riding in the HomeLIFT from floor to floor of the two-story exhibit.

SIEBRANDT MFG. CO.

Booths B-64, B-123

J. SKLAR MANUFACTURING CO.

Booth B-140

The Sklar exhibit will present an impressive display of new and standard Stainless Steel Surgical Instruments, many of which have never before been shown at an A.M.A. Convention. The display will also include Sklar's full line of Suction and Pressure Apparatus, Sklar's Improved Schiotz Tonometer, and the famous Davidson's Pneumothorax Apparatus.

CARROLL DUNHAM SMITH PHARMACAL CO.

Booth C-58

THE SMITH-DORSEY COMPANY

Booth C-54

SMITH, KLINE AND FRENCH LABORATORIES

Booths C-27, C-29

C. M. SORENSEN CO., INC.

Booth A-7

THE SOUNDSCRIBER CORPORATION

Booth C-104

Right next to the ever popular Physicians Art Exhibit, The SoundScriber Corporation will display SoundScriber electronic disc dictating equipment. This smart display will feature in large photographic treatment, some of the many and varied medical uses for SoundScriber. Doctors may actually dictate to this plastic disc equipment and see, by actual experience, just how it serves the medical profession.

SPENCER, INCORPORATED

Booth C-19

Spencer Individually Designed Supports prescribed by physicians in conservative and post operative treatment of ruptured intervertebral disc, sacroiliac and lumbosacral sprain, visceroptosis, hernia and other conditions will be featured. The Spencerflex for Men--a revolutionary and functional support design--will be of especial interest as will be the Spencer Breast Form and the new adjuvant to thoracic surgery--the Spencer Thoracoplasty Binder.

SPINDLER AND SAUPPE

Booth A-157

THE SPIRELLA CO., INC.

Booths C-124, C-126

Spirella will show how their Foundation Garments use an entirely new and different method of corsetry designing. The unique Spirella method includes the use of exclusive modeling Garments which are adjusted to the patient to give just the degree of support desired. Then measurements are taken of the supported figure, and the patient's Spirella is individually made to exact specifications.

E. R. SQUIBB & SONS

Booth-139

With R.C.A., E. R. Squibb & Sons is sponsoring the television program being put on by Northwestern University Medical School. In booth B-139, E. R. Squibb & Sons is also presenting an exhibit on STREPTOMYCIN. A series of colored slides on current clinical problems in the use of this drug will be shown in continuous projection on a screen centered in the booth. Stress is laid on two important points: Action of Streptomycin on the eighth nerve, and the development of resistance.

STANDARD X-RAY COMPANY

Booth B-171

In Booth B-171 the Standard X-Ray Company will exhibit modern x-ray apparatus, especially designed for office installation. Attendants will be glad to furnish complete information and recommendations for individual requirements.

STEPHENSON CORPORATION

Booth C-90

R. J. STRASENBURGH COMPANY

Booth A-159

Anemias and the position of Folic Acid therapy in their management will be featured. Panels depicting the development and background of other Council-Accepted products will also be displayed. Capable representatives, including members of Strasenburgh's Research Staff, will be present at all times.

STRONG COBB AND COMPANY, INC.

Booth C-156 (East ½)

SURGERY, GYNECOLOGY AND OBSTETRICS

Booth A-6

The character, personality and quality of the journal "Edited by Practicing Surgeons to Meet the Needs of the Practicing Surgeon" is depicted at booth A-6. The printing, illustrations, and editorial standard are portrayed through "Translites" which illustrate briefly the many features of America's foremost surgical journal.

SWIFT & COMPANY

Booths B-26, B-28

TAMPAX INCORPORATED

Booth A-59

Hygienic and comfortable protection afforded in the TAMPAX method of menstrual care and the

V 13 1948

importance of professional instruction of patients in the correct use of intra-vaginal tampons will highlight this exhibit. Educational consultants will share with you informal problems about which women have expressed need for guidance. New anatomical charts showing the female reproductive organs, prepared under the supervision of Robert L. Dickinson, M.D., will be available.

TAYLOR INSTRUMENT COMPANIES

Booths C-129

W. A. TAYLOR & COMPANY

Booth C-150

Diagnostic aids in the analysis of blood and urine will highlight the W. A. Taylor exhibit. Colorimetric equipment for determining sulfa drugs, blood sugar, NPN, urea nitrogen, urine pH, thiocyanate, icterus index, hemoglobin, cholesterol and PSP, supplied with guaranteed permanent color standards mounted by sets for each determination in plastic slides, and apparatus for determining blood chlorides and vitamin deficiencies will also be available.

THE TECHNICON COMPANY

Booths A-1, A-3

The AUTOTECHNICON which provides automatic tissue processing and staining by any preferred histologic technique; will be the SCOPICON which offers a most powerful light source for photomicrography or microprojection, either on wall screen, or in a dark-chamber table for small-group study; and the Technicon FRACTION COLLECTOR for automatic collection of fractional constituents in biochemical solutions.

TELEX, INC.

Booth C-172

TEXAS PHARMACAL COMPANY

Booth C-52

The Texas Pharmacal Company will exhibit a complete line of hypo-allergenic cosmetics, marketed under the name of Allercreme, also bases and vehicles for use in preparing dermatological prescriptions.

CHARLES C THOMAS PUBLISHER

Booth C-2

MARVIN R. THOMPSON, INC.

Booths C-162, C-164

THE TOIDEY COMPANY

Booth B-176

Pediatricians and other physicians who care for children, will want to call at booth B-176, near the Art Exhibit, to see the new Toidey Specimen Collector, helpful in getting specimens for urinalysis from both the infant and the growing toddler. Special complimentary discounts will be given physicians on orders for Little Toidey and allied items, including comfySAFE AutoSeat.

THE TOWER COMPANY, INC.

Booth B-130

U.M.A. INC.

Booth B-24

PERIPHERAL VASCULAR DISEASES will headline the U. M. A. exhibit. Here you will see the COLLENS Sphygmo-oscillometer, a blood pressure apparatus and oscillometer combined in one instrument, for the diagnosis of Vascular Disease; and the COLLUTIL Intermittent Venous Occlusion Apparatus, for the therapy of Vascular Diseases.

UNIVERSAL PRODUCTS CORP.

Booth B-120

UNIVERSAL X-RAY PRODUCTS, INC.

Booth C-176

THE UNIVERSITY OF CHICAGO PRESS

Booth C-24

Distinguished for authoritative content and excellence of editorial work, the books of University Presses claim enviable rank among non-fiction and technical publications. The Association of American University Presses has arranged a cooperative exhibit for your enjoyment at this meeting--and to give you an opportunity to purchase some of the important titles for your library.

THE UPJOHN COMPANY

Booths B-116, B-118

The theme of The Upjohn Company exhibit will be "Adrenal Cortex and Resistance." The central panel of the exhibit symbolizes that man's resistance to stress is being increased by science. The other panels show the effect on the adrenals of various stresses -- infection, exercise, surgery, and anemia. The final panel shows the relative potency of adrenal cortex sterile solution and lipo-adrenal cortex steril solution.

U.S. VITAMIN CORPORATION

Booth C-7

THE VANTA COMPANY

Booths C-76, C-78

VANTA garments for infants -- layette items without pins or buttons and Self-Help garments for Toddlers will be exhibited in Booths C-76, C-78. Vanta, originator of the Tie Vest, Sun Suit, K-Band Baby Bess Hose, and other important features, will also show No-Fas-Ning shirts and the latest developments in proper clothing.

VARICK PHARMACAL CO. INC.

Booths C-81, C-83

VICTOR PRODUCTS CORPORATION

Booth A-109

WALGREEN DRUG COMPANY

Booth A-137

One of America's most modern Prescription Departments as developed by Walgreen Drug Company for future installation in its stores will be seen here. Complete in every respect, this new unit will go into service in a new Walgreen Drug Store when the Convention is over. Your full inspection is invited; Walgreen Registered Pharmacists in attendance will be happy to hear your comments.

WALKER VITAMIN PRODUCTS, INC.

Booth B-104

Walker will again exhibit its line of Council-Accepted vitamin tablets, capsules, injectable solutions, and pediatric drop preparations. Experienced representatives in attendance will be qualified to discuss all phases of vitamin therapy.

WALLACE LABORATORIES, INC.

Booth B-3

WALLACE & TIERNAN PRODUCTS, INC.

Booth C-177

WALTON LABORATORIES, INCORPORATED

Booths A-61, A-63, A-65

Shown for the first time at an A.M.A. Annual Session will be the newly developed Oxygen Tent Humidifier of Walton Laboratories, Inc. This unit makes it possible to maintain a high humidity in an oxygen tent while oxygen is being administered. Other humidifiers of interest will include Pottery and Bronze table models; single and duplicate cabinets; and a highboy Model.

THE WANDER COMPANY

Booth A-87

Visitors are invited to stop at the Wander Company booth for a drink of delicious Ovaltine. Attendants will gladly answer any questions you may have about the composition, merits, and usefulness of Ovaltine. Valuable, informative literature on nutrition will also be available for distribution.

WILLIAM R. WARNER AND CO., INC.

Booths B-82, B-84

WATERS CONLEY COMPANY

Booth C-8

A new Automatic Home Pasteurizer which offers safe, pasteurized milk to every farm family in rural areas where commercially pasteurized milk is unavailable will be displayed at the Waters Conley exhibit. Also featured will be some of the excellent scientific instruments made by the Waters Conley Laboratories, including the Cardiotachometer and the Kymographic Camera.

WECO PRODUCTS COMPANY

Booth C-160

This attractive exhibit will be devoted to Dr. West's Miracle-Tuft Toothbrushes. Combining exaggerated size, color, and illumination, Dr. West's have reproduced a giant Miracle-Tuft Toothbrush and its well-known glass package. Lithographed in full color on transparent parchment and shaped like the actual glass package, it makes a pleasing and powerful reminder to the layman to replace his Dr. West's Miracle-Tuft Toothbrush.

WELCH ALLYN, INC.

Booth B-5

Visitors to the Welch Allyn exhibit will find a wide variety of diagnostic instruments -- the ophthalmoscope, otoscope, rectal instruments, transformers, and laryngoscopes. Educational slides, photographs, and paintings will assist the doctor in the more efficient use of diagnostic instruments.

THE WESTERN ELECTRIC COMPANY

Booth A-174

Western Electric's 4-Type Group Audiometer for testing the hearing of as many as forty persons at a time, as well as the 6-Type Audiometer for individual hearing tests, will be shown here. In addition, Western Electric's new Models 65 and 66 Hearing Aids will be demonstrated. Visitors to this exhibit will also have an opportunity to review important new developments of Bell Telephone Laboratories.

WESTINGHOUSE ELECTRIC CORP.

Booths A-36, A-38, B-35, B-37

Four major units will be exhibited by Westinghouse X-Ray Division; the DUOFLEX Table with the new 4 on 1 Spot Film Device and Reciprocating Bucky; the MONOFLEX-a single tube diagnostic unit; the RX-a single tube unit designed especially for the general practitioner and small hospital; and the PFX - the mass chest x-ray unit. In addition, various models of automatic controls will be displayed.

WHIRLPOOL CARRIAGE, INC.

Booth C-20

WHITE LABORATORIES, INC.

Booths B-69, B-71, B-94, C-15, C-17, C-94, C-95

THE WILLIAMS AND WILKINS COMPANY

Booths C-10, C-12

Convention visitors are cordially invited to visit the brand new exhibit of The Williams & Wilkins Company. It will reflect modern design and present new features never before used by a medical publisher, including a built-in slide-projection apparatus. More than 20 new 1948 books will be displayed.

WINTHROP-STEARNS INC.

Booths C-47, C-49, C-51, C-53

Winthrop-Stearns Inc.—new owner of the businesses formerly conducted by Winthrop Chemical Co. and Frederick Stearns & Co.-will feature transparencies of beautiful medical art by the well-known artist, Mr. Leon Schlossberg. The exhibit includes (1) kidney and renal pelvis and calices; (2) head with paranasal cavities; (3) section through woman at term; (4) cardiovascular failure and edema; (5) normal heart with valves; (6) brain, including visualization of the thalamus, hypothalamus, and medulla oblongata; (7) normal bone marrow; (8) pathogenesis of hypertension.

WISCONSIN ALUMNI RESEARCH FOUNDATION

Booth B-60

The Foundation will show by charts the results of recent studies with the anticoagulant Dicumarol and with diluted plasma determinations. It will also show the effect of other substances on prothrombin. Christian P. Sogard, M. D., Medical Director of the Foundation will be at the booth.

THE MAX WOCHER AND SON CO.

Booth C-93

WOODWARD MEDICAL PERSONNEL BUREAU

Booth B-7

Woodward Medical Personnel Bureau, with a record of 52 years of continuous service to the profession will offer its facilities in Booth B-7. Credentials of really outstanding medical personnel seeking appointments and unusual openings for qualified men in all specialties will be available. Physicians, hospital managers, and other executives will want to stop by for a discussion of their personnel problems.

WYETH INCORPORATED

Booths B-66, B-68, B-70, B-72

THE YEAR BOOK PUBLISHERS, INC.

Booth C-9

F. E. YOUNG AND COMPANY

Booth A-129

ZENITH RADIO CORPORATION

Booth A-167

On display here will be the new Zenith '75' Hearing Aid -- the radionic instrument formally announced to the profession in the J.A.M.A. of February 28, 1948. Zenith representatives will be pleased to explain a plan whereby the '75' can be tested by any physician without cost or obligation to him or his hard-of-hearing patients.

ZIMMER MANUFACTURING COMPANY

Booth B-113

In addition to a complete line of splints and all types of fracture equipment, Zimmer will display new and improved instruments including the Moreira Stud-Bolt, Myerding Chisels-Gouges-Osteotomes, Bone Clamps, Doctor Eggers Contact Splint, Bone Plates and Cross Slotted Screws, Two-Speed Hand Drill, Intramedullary Nails & Instruments, Scott-McCracken Periosteal Elevators, Blount Staple Set, and the Luck Bone Saw.

ORGANIZATION SECTION

JOINT COMMITTEE FOR THE COORDINATION OF MEDICAL ACTIVITIES

Report of Meeting in Chicago, March 6, 1948

The Joint Committee for the Coordination of Medical Activities met in the Board Room of the American Medical Association Building in Chicago, Saturday, March 6, 1948. The meeting was called to order by the Chairman, Dr. Ernest E. Irons. Members, liaison members and guests present included:

Dr. Donald G. Anderson
Brig. Gen. George E. Armstrong
Dr. Walter L. Bierring
Dr. Frederick A. Coller
Mr. P. H. Costello
Dr. W. Palmer Dearing
Dr. Warren F. Draper
Capt. William E. Eaton (MC), U.S.N.
Dr. Morris Fishbein
Father John P. Flanagan, S.J.
Dr. J. F. Hemond
Dr. Elmer L. Henderson
Mr. Thomas A. Hendricks
Dr. Ernest E. Irons
Dr. George F. Lull
Capt. F. L. McDaniel (MC), U.S.N.
Dr. J. J. Moore
Dr. H. B. Mulholland
Dr. Walter L. Palmer
Dr. James E. Paullin
Col. Paul I. Robinson
Dr. R. L. Sensenich
Dr. E. R. Serles
Miss Mary Switzer
Mr. Kenneth Williamson

The Surgeon General of the Navy requested that the Medical Department of the Navy should have two representatives, so Captain Eaton will continue his connection with the Joint Committee and Captain McDaniel will represent the Bureau of Medicine and Surgery. Mr. P. H. Costello, secretary of the National Association of Boards of Pharmacy, was in attendance in place of Dr. Fischelis, representing the American Pharmaceutical Association.

NAVY MEDICAL TRAINING PROGRAM IN PACIFIC

Captain McDaniel read the following memorandum, signed by Robert V. Schultz, Commander (MC):

The School of Medical Practitioners, Guam, shortly will be designated officially by the Navy as the School of Medical Assistants, Guam, in conformity with the recommendations of the Committee appointed at the Dec. 6, 1947 meeting of the Joint Committee for the Coordination of Medical Activities.

(The Committee mentioned by Commander Schultz consisted of Dr. Edward L. Bortz, President, and Dr. George F. Lull, Secretary of the American Medical Association, and Commander Schultz.) The Joint Committee expressed satisfaction with the proposed designation of the Guam school as reported by Commander Schultz.

THE GENERAL PRACTITIONER

Dr. Sensenich, member of the Subcommittee on the General Practitioner, presented information relative to a recent meeting of the Board of Trustees of the American Medical Association with officers and representatives of the American Academy of General Practice, which was organized at Atlantic City, N. J., in June 1947.

The general practitioner is defined as "a licensed physician and surgeon who holds the degree of M.D., and who does not limit his practice exclusively to a particular field of medicine or surgery."

The objects and purposes of the academy are: (1) to promote and maintain high standards of the general practice of medicine and surgery; (2) to encourage and assist young men and women in preparing, qualifying and establishing themselves in general practice; (3) to preserve the right of the general practitioner to engage in medical and surgical procedures for which he is qualified by training and experience; (4) to assist in providing postgraduate study courses for general practitioners, and to encourage and assist practicing physicians and surgeons in such training, and (5) to advance medical science and private and public health.

Does the academy advocate that all general practitioners be permitted to practice medicine and perform surgery in all hospitals? No. The academy recommends that proper requirements be maintained for staff privileges in all hospitals; ... that hospital privileges be extended to all licensed physicians on the basis of competency. ... The academy endorses official actions taken by the American Medical Association, the American Board of Surgery and other interested organizations opposing any hospital regulations which confine staff membership or the right to perform certain medical and surgical procedures to specialists who have been certified by the respective specialist boards.

Does the academy propose to establish a certifying board in general practice? No. In years to come a certifying board of general practitioners to examine candidates engaged in general practice may be possible, but such is not the present intention of the academy. While the academy does not plan to conduct examinations of candidates for membership, membership for the general practitioner in the academy corresponds to a certification by a board for the specialist.

There are approximately 135,000 members of the American Medical Association. Of these, approximately 40,000 are specialists. Thus there are nearly 100,000 general practitioners. It is hoped that eventually most of these will become affiliated with the American Academy of General Practice.

Dr. Bierring, also a member of the Subcommittee, discussed the subject. He observed that there is at least a tendency to feel that within the next ten years the practice of medicine and the offices of physicians will center more and more around a hospital, and that there will be a closer integration. He said: I feel that by establishing a special service for general medicine in a large general hospital, the participants will appreciate what a broad field they have before them for service to their patients and will feel that it is a better opportunity for them than if they confine themselves to some special field where they will be limited in their practice and limited, also, with respect to locations.

Dr. Fishbein stated that the Colorado experiment is only one of about thirty experiments now being made, and that he thought it would be a mistake to endorse any one of these experiments as ideal. He also thought that all of them should be watched and ought not to be discouraged. Dr. Fishbein continued: One thing which has been forgotten in these experimental plans is the great significance of the cost of transporting patients, which in many instances amounts to more than the entire medical bill.

It was the opinion of the Chairman that the Joint Committee for the Coordination of Medical Activities might "view with interest" all these experiments, and that out of them should come improvement in medical education and medical practice.

Dr. Anderson said: There is apparently a definite increase in the feeling of responsibility on the part of medical schools to interest and stimulate their students toward general practice. There is also apparently a definite increase of interest on the part of the students themselves. Several polls taken during the last year indicate that there is a reversal of the feeling of two to four years ago, when the great majority of students indicated desire to go into special fields of practice. I think that no less than forty to forty-five of the medical schools have some definite program under way to interest the students in this type of practice on the undergraduate level and some on the graduate level.

BIPARTISAN COMMITTEE ON REORGANIZATION OF FEDERAL AGENCIES

Miss Switzer submitted a report on the status of the Bipartisan Committee on Reorganization of Federal Agencies, of which Mr. Herbert Hoover is chairman.

NATIONAL HEALTH ASSEMBLY

The Chairman requested a discussion of the plans and purposes of the National Health Assembly called by the Federal Security Administrator, Mr. Oscar R. Ewing, to meet in Washington, D.C.

COOPERATIVE HEALTH EDUCATION PROGRAMS

Dr. Serles read a report prepared by Dr. Robert P. Fischelis, of the American Pharmaceutical Association, relative to encouraging the utilization of the pharmacies of the United States in the education of the public on health matters.

Each year the American Pharmaceutical Association would dedicate National Pharmacy Week to one of the broad public health programs. This year more than seventeen thousand pharmacies have responded, and difficulty in financing the supply of a sufficient number of displays to meet all requests is experienced.

In addition to the aid given the American Cancer Society through National Pharmacy Week, special assistance was provided the American Heart Association this year in its campaign to present forcefully to the attention of the public the necessity for early recognition and treatment of cardiovascular diseases. Thousands of displays were asked for by pharmacists, at the suggestion of the American Pharmaceutical Association, through a special bulletin issued to the members of State Pharmaceutical Associations.

Dr. Fishbein thought the material which the American Pharmaceutical Association is distributing for display in individual pharmacies represents a commendable effort in public health education supplementing that of medical schools and medical agencies. He moved that the Joint Committee for the Coordination of Medical Activities endorse it as a part of the great campaign for public education.

UNIFORM PHARMACY PRACTICE ACT

Dr. Serles presented a statement concerning the need for greater uniformity of the laws governing the practice of pharmacy in the several states.

The educational requirements and the procedure for licensure have attained a high degree of uniformity. The actual practice of the profession in the several states varies considerably. This affects not only the procedures followed by the pharmacist, but it likewise affects the practitioner of medicine and is ultimately reflected in the service to the patient. In only one instance of prescription practice are the procedures generally quite uniform, and that is the distribution of drugs under the Harrison Narcotic Act. In all other instances the establishment of the practice of pharmacy under the state pharmacy practice act has resulted in a wide variance of procedure for such important drugs as the barbiturates, the dangerous drugs, drugs not requiring a prescription, drugs dispensed by a physician, drugs dispensed in hospitals, drugs distributed by state boards of health and drugs distributed by mail order houses.

Dr. Serles read the proposed uniform pharmacy practice act and asked the support of the Joint Committee, saying that the American Pharmaceutical Association is desirous of securing the strongest support from all interested agencies. The Chairman wondered if the proposed law might not be so extensive that it could be attacked on the ground that it created a monopoly, and Dr. Serles replied that he thought not, that it has been carefully studied by the National Drug Trade Conference and that in the major part it simply defines the practice of pharmacy.

Dr. Fishbein moved that the Joint Committee for the Coordination of Medical Activities endorse the principle of a minimum standard and its uniform adoption throughout the nation for the practice of pharmacy under laws and regulations that will protect both the people and the pharmacist. The motion was seconded by Dr. Bierring and was adopted.

HOSPITAL SURVEY AND CONSTRUCTION ACT

Dr. Dearing reported that the House of Representatives has passed a deficiency appropriation of several million dollars. Thirty-six state plans covering three fourths of the states have now been approved. The total cost to the government is $63,000,000. One hundred and fifty individual projects have been approved, totaling $69,000,000 worth of construction. Two thirds of the money involved is nonfederal, one third federal. Presumably construction has actually started on some projects. It is possible that changes in the basic act to provide additional appropriation will be considered near the end of the period which the act covers. Congress has shown no disposition to hold back on the allocation as the projects have come in; the deficiency appropriation for this year is an indication of the trend.

OSTEOPATHS AND THE GOVERNMENT SERVICES

The Chairman asked Dr. Dearing to give the Joint Committee some information about the recent amendment of the Public Health Service Act, and Dr. Dearing replied as follows:

> Our so-called promotion bill to amend the Public Health Service Act was for the purpose of putting the promotion system in line with that of the armed services. An amendment was added, which we did not sponsor or request, which provides that "graduates of colleges of osteopathy whose graduates are eligible for licensure to practice medicine or osteopathy in a majority of the States of the United States, or approved by a body or bodies acceptable to the Administrator, shall be eligible subject to the other provisions of this Act, for appointment as commissioned medical officers in the Public Health Service."
>
> Much thought has been given to this problem. The basic law covering the Veterans Administration authorizes the appointment of osteopaths, and the Navy also has authorization for the appointment of osteopaths as medical officers, but there are certain limitations. Under this amendment, the Public Health Service has no such limitations. The utilization of the osteopaths, if they pass the examinations and are admitted, will be somewhat of a

problem; two or three of our hospitals have indicated that they could use a properly trained man in the physical medicine departments. The Veterans Administration has one and is about to or just has employed another.

A motion was made by Dr. Fishbein that the Joint Committee for the Coordination of Medical Activities " view with alarm " the possibility of commissioning as medical officers in the U. S. Public Health Service persons without adequate knowledge or training in preventive medicine and public health. The motion was duly seconded and adopted.

OUTBREAKS OF ILLNESS AMONG THE NEWBORN IN HOSPITALS

Mr. Williamson was asked by the Chairman to present a brief statement on outbreaks of illness among the newborn in hospitals, a subject on which Mr. Graham Davis had requested discussion at the last meeting of the Joint Committee. Mr. Williamson's remarks were as follows:

One approach that is being made to the problem is a basic study of the formula room, and it is expected that the committee having this in hand will make a report by September. Some radical changes probably will result from this study and improvements will ensue, probably in the simple things like the washing of bottles, and the space used.

IMPROVEMENT OF SURGICAL SERVICE IN HOSPITALS

The Chairman asked Dr. Fishbein to speak on the subject of improvement of surgical service in hospitals, which he did as follows:

We have been working for some time on a proposal that there be published annually in THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION a tabulation of the number and character of surgical operations and their general results. In the initial study, probably one hundred hospitals will be chosen at random and asked to keep records over a six month period of at least two surgical operations. The hospitals and the surgeons doing operations will be coded and the whole study carried out on an anonymous basis. If adequately conducted, the study should bring out a vast amount of important and controlled information as to the quality and the results of surgery in the hospitals over the country. It is conceivable that a study of this kind would result in a great improvement of surgical service and also might help to refute charges of unnecessary surgical procedures.

Dr. Coller said that the American College of Surgeons has been discussing the same thing and already has carried on studies of a similar nature. Dr. Henderson thought the project extremely worth while and moved that the Joint Committee for the Coordination of Medical Activities endorse it. The motion was seconded and adopted.

AMERICAN RED CROSS BLOOD BANK PROGRAM

Dr. Draper presented a statement to the effect that the first national blood center had its official opening at Rochester, N. Y., on January 12. On the following day this center was serving all the hospitals in the city and also the hospitals in the cities in the eleven surrounding counties. This is known as the Genesee Valley National Blood Center, and supplies the blood needs of more than a million persons. The physicians and hospitals in this area are pleased, and the program has the complete cooperation of the medical societies and all other agencies concerned.

The second national blood center was opened at Wichita, Kan., on January 14. It is a going concern at the present time and is supplying the blood requirements of all of the hospitals in Wichita in a satisfactory manner. The regional program is being expanded throughout the seven surrounding counties. There is complete cooperation on the part of all of the medical societies, physicians and hospitals throughout the area, all having expressed entire satisfaction with the program.

The third national blood center was opened at Atlanta, Ga., on February 17. There are forty-one participating chapters of the Red Cross in the counties surrounding Atlanta extending for a radius of 80 miles. At present the program is supplying the hospitals in Atlanta and the mobile operation is well under way. When in full operation this program will meet the hospital needs in all cities within the area and will meet the blood requirements of approximately 1,500,000 persons.

The fourth national blood center was opened at Stockton, Calif., on February 21. It serves the northern end of the San Joaquin Valley and supplies the blood requirements of approximately 500,000 persons. There is complete cooperation on the part of the medical societies and hospitals within the area, and all have expressed great satisfaction with the results which are being obtained.

A blood center was opened at Washington, D. C., on January 9 on a limited basis. It will become a part of the national program about May 1. At present it is supplying the needs of the veterans' hospital and other government hospitals in the District of Columbia, and also emergency service in all hospitals in the District of Columbia.

The national blood center at Louisville, Ky., is in the process of formation and will be in operation probably about May 15. It will serve the city of Louisville and fourteen surrounding counties in Kentucky and Indiana.

A national blood program center will be opened at San Jose, Calif., on May 1. It is being developed with the full cooperation of the local medical societies and all other agencies. It will supply the blood needs of more than 500,000 persons in the Santa Clara and Salinas Valleys and in Santa Cruz County.

The blood program of the state of Massachusetts became part of the National blood program on March 1. It serves the entire state of Massachusetts with the exception of Boston proper. A contract is in force with the state laboratories for the processing of blood collected from the various cities.

Dr. McIntire has held discussions with representatives of the Chicago Red Cross Chapter and its Medical Advisory Committee, with a view to starting a National Blood Program center in the autumn of this year.

After lengthy discussion, the Joint Committee voted to reaffirm its approval in principle of the Red Cross Blood Bank Program and authorized the earliest possible publication of the progress report presented by Dr. Draper.

RURAL MEDICAL SERVICE

Dr. Mulholland presented the following progress report:

The third National Conference on Rural Health was held about a month ago. Preparation and planning for the Conference was participated in by the American Academy of Pediatrics, and the general theme of the program was the health status of the rural child. Also cooperating in the Conference were the National Cooperative Milk Producers Federation, the Farmers' Educational Cooperative Union, the National Grange and the American Farm Bureau Federation. More than five hundred persons were in attendance.

One of the highlights of the Conference was the presentation by Dr. Maurice H. Friedman of his analysis of selective service statistics, in which

be above that the draft rejectee figures are not a measure of the health of any community. We had at the Conference four young persons from rural areas who told us exactly what they thought about rural medical service and care. There was considerable discussion about nutrition, school lunches and child psychology. One of the main points brought out in the various papers and discussions was the need for more and better medical service in rural areas. Most of the efforts of the Committee on Rural Medical Service are in that direction, and we hope to have working for us a specialist who will be able to help the local people and show them how the needs can be met.

WORLD MEDICAL ASSOCIATION

Dr. Henderson presented a report on the present status of the World Medical Association.

A classification of Founder and Sustaining Member of the United States Committee has been established to include physicians, medical organizations allied to the medical profession, such as the American College of Surgeons and the American College of Physicians. The organizations will be requested to come in as Founder and Sustaining Members with a membership fee of $2,000 a year. The dues of the American Medical Association as a member of the World Medical Association probably will be more than double the dues of any other organization, the nearest being the British Medical Association. Most of the medical organizations of Europe are destitute and cannot supply funds. In addition to the dues paid to the World Medical Association, which are substantial, the American Medical Association has come in as a Founder and Sustaining Member of the United States Committee at $2,000 a year, and some other medical organizations have become Founder and Sustaining Members. Business firms serving or allied to the medical profession are asked to contribute to the United States Committee according to the size of their organizations. We have had quite a few contributions, ranging from $10,000 down to $100. Within the next few days we expect to send out a letter to a selected number of physicians over the country, about 10,000, requesting them to come in as Founder and Sustaining Members with a membership fee of $10 a year. There have been quite a number of physicians who have already come in and subscribed under that provision. Some laymen will join under the same category at $10 a year.

The delegation from the United States has reason to believe that the World Medical Association is a wholly worth while project. It is going to take money. The United States Committee has undertaken to pay all the expenses of the headquarters office, which will be located in New York. In addition to paying all the expenses of the office and that involved in the publication of a bulletin or journal, we shall have to pay the expenses of the officers and Council members when they attend a meeting, which probably will be twice a year. It was voted in Paris, France, that the annual assembly this year would be held in Prague, Czechoslovakia, but since then there have been developments which may make it impossible to go to Prague. We are hoping that at the meeting of the Council in April the location for the assembly will be changed to some other country, and some of us hope it will be held in Geneva, Switzerland. Incidentally, checks in support of this enterprise can be made payable to the World Medical Association, United States Committee.

INFORMATIONAL REPORTS

Graduate Education for Medical Officers in the European Theater of Operations

The Chairman inquired of General Armstrong concerning the development of the educational plan for medical officers in European service, and the general stated that matters are going along in a most satisfactory manner and that the response of American physicians volunteering to spend a certain length of time in Europe for the purpose has been gratifying.

TIME AND PLACE OF NEXT MEETING

It was decided to hold the next meeting of the Joint Committee for the Coordination of Medical Activities at American Medical Association Headquarters in Chicago on Saturday, June 5, 1948.

Washington Letter

(From a Special Correspondent)

May 13, 1948.

Ewing Drafting Ten Year Health Plan for Nation

Federal Security Administrator Oscar R. Ewing announced that an outline of a ten year national health plan requested by President Truman last January would be ready within a few weeks. He made this announcement following the wind-up of the National Health Assembly here. He is studying the reports of the fourteen conference sections to obtain material for the program, but emphasized that he will take full responsibility for whatever plan is submitted to Mr. Truman. Mr. Ewing declared that the assembly had been "unbelievably successful." He said the exchange of opinions between lay and professional people would produce public opinion to support a health program.

Early Action on World Health Organization Expected

The House of Representatives is expected to take action soon on legislation to permit the United States to join the World Health Organization. Speaker of the House Joseph W. Martin Jr., Republican of Massachusetts, expressed the hope that the House Rules Committee, which has had the bill tied up for months, would report on the bill in the immediate future. Representative Leo Allen, Republican of Illinois, Rules Committee chairman, said that he knew of no change in the opinion of members who had tabled the measure early in March, but it was reported elsewhere that a sufficient number of members have swung over to assure passage. The State Department has favored early action so that the United States could take part in the meeting of the World Health Organization in Geneva, Switzerland, in June.

Federal Security Agency Voted Operating Funds

The House has voted and sent on to the Senate a bill appropriating $969,050,000 in operating funds for the Federal Security Agency for the fiscal year beginning May 1. The measure is $20,673,000 below the total requested by the agency for its activities, which include the U.S. Public Health Service and the Food and Drug Administration. The bill also provides $1,000,000 for a national campaign to train dentists in the use of sodium fluoride to check dental decay.

House Approves Bill for Research on Artificial Limbs

The House of Representatives has passed and sent to the Senate a bill to give the Veterans Administration $1,000,000 annually to continue its research on artificial limbs. Results of the studies would be available to public rehabilitation agencies as well as the Veterans Administration under the provisions of the bill.

Antitrust Suits Against Optical Dealers and Eye Doctors

Attorney General Tom Clark announced that he has filed four antitrust suits against a group of Midwestern optical wholesalers and a long list of eye doctors. The complaints allege that the companies turned over to the eye doctors about half of the fees charged patients for filling prescriptions for glasses. The suits seek to halt payment of such rebates or prevent their acceptance by doctors. Assistant Attorney General John F. Sonnett, head of antitrust prosecutions, said it was hoped that the actions would cut substantially the prices of eye glasses to the public.

ARMY

MORE RESERVE OFFICERS ON ACTIVE DUTY

The Surgeon General announced April 12 that authority had been granted to place three hundred medical service reserve officers on extended active duty. Reserve officers who volunteer may be assigned to duty in all four sections of the corps according to their qualifications. The greatest need is in the medical allied science section, which includes personnel trained in biochemistry, nutrition, physiology, serology and psychology.

The Regular Army Medical Service Corps has an authorized officer strength of one thousand and twenty-two. Vacancies in this corps will be filled through the medium of competitive tours of active duty for reserve officers. Qualified men interested in an Army career may apply for reserve commissions. Plans are being made to expand the graduate training program for Regular Army Medical Corps Officers, including training at civilian institutions in a wide variety of subjects. Many leading universities are cooperating in this training program.

The Surgeon General has announced that the following medical reserve officers have entered on tours of active duty with the Army: Colonels Charles Holmes, Seattle, and Norman W. Elton, Newton Highlands, Mass.; Lieut. Col. Henry C. Dorris, Winona, Miss.; Majors Lester S. Grieder, Dauphin, Pa., and Julian C. Kennedy, Indianapolis; Captains Timothy A. Callahan, Baltimore; William B. McLaughlin, West Orange, N.J.; Antonio S. Medinga, Box 177, Mato Rey, Puerto Rico; Charles Norman Moss, Boston; William Stone, San Pedro, Calif., and Ernest Allen Brav, Louisville, Ky., and Lieut. Harry Vernon Pifer Jr., New York.

DAYS LOST DUE TO SICKNESS AND INJURY

Lieut. Col. Alfred P. Thom, M.C., chief, Development Branch, Medical Research and Development Board, Office of the Surgeon General, Composite Group, Bridgeport and Hartford, Conn., March 10-11, said that: "During the last war, wounded, died of wounds, killed in action and prisoners of war were responsible for about one third of the permanent losses of effectives that occurred, the remainder being largely due to sickness and injury. About 15,000,000 men were hospitalized for disease between Jan. 1, 1942 and Aug. 31, 1945, and 2,000,000 men were hospitalized for injury. With manpower probably the most critical item in our war effort, it is estimated that the average loss of manpower through hospitalization and quarters amounted to an average of over 309,000 men per day throughout the war period, and that an additional 773,000 directly or indirectly were required for patient care. It is thus apparent that, with about 10,000,000 men mobilized by the Army, at least 1 out of 10 men was totally unavailable for tactical or other military employment, because of either being a patient, or through being required for patient care. This condition exists in spite of the best medical service probably ever possessed by an Army, and with the best health, disease and injury treatment record of any Army in History."

MEDICAL SERVICE IN CANAL ZONE

Members of the Committee on Medical and Hospital Services of the Armed Forces, appointed by the Secretary of Defense, recently visited the Panama Canal Zone. The members who went there are the Surgeon General of the Army, Major Gen. Raymond W. Bliss, the Surgeon General of the Navy, Rear Admiral Clifford A. Swanson, Col. John Hargreaves, M.C., representing the Air Surgeon, and Major Gen. Malcolm C. Grow, M.C. These representatives agreed on the approach to medical problems related to the Canal Zone. This area is unique in having an over-all medical problem affecting the Army, Navy, Air Force and Panama Canal organization. Medical services there can be coordinated for the best interests of all these elements. There is unanimity of purpose and action to demonstrate to the world that the highest health standards can be maintained in a tropical area. The Committee on Medical and Hospital Services is not empowered to take direct action and is obligated to make recommendations to the Secretary of Defense.

PERSONAL

Major Frank B. Rogers, M.C., has been appointed special assistant to the director of the Army Medical Library. Major Rogers graduated at Yale University and the Ohio State University Medical School and entered the military service in 1943. After serving in the Pacific area during the war and in Japan, he served briefly at Walter Reed General Hospital before coming to the library.

NAVY

NEW REGULAR OFFICERS

The following graduates of the Navy's V-12 program have accepted appointments in the medical corps of the regular Navy: Lieuts. (jg) John W. Howard, Argyle, N.Y.; Thomas W. Stewart, Pelham, N.Y.; Louis Sussman, New York; Albert E. Thielen, Cincinnati, and Richard K. Williams, Richmond, Va.

Comdrs. Warner D. Bundens Jr., Mickleton, N.J.; Broor A. Johnson, Rita, N. Mex., and Lieut. Comdr. John D. Boland, Sterling, Ill., of the naval reserve, have accepted appointments in the regular Navy Medical Corps.

The following physicians have accepted appointment in the medical corps of the Regular Navy: Lieut. (jg) Charles E. Boonstra, Lafayette, Ind., graduate of the University of Indiana School of Medicine under the V-12 program; Lieut. (jg) Robert E. Baker, Detroit, formerly medical corps reserve officer; Lieut. Ralph L. Vasa of Brooklyn, formerly in the reserve corps, and Lieut. (jg) Leonard J. Raider, Philadelphia, a graduate of the University of Pittsburgh School of Medicine.

PERSONALS

Capt. Eric G. Hakansson, commandant, Naval Medical Research Institute, Bethesda, Md., has been ordered to the Naval Hospital for treatment and has been relieved as commandant of the Re-

V 13
1948

search Institute by Capt. Charles F. Behrens, formerly chief of the Atomic Defense Division of the Bureau of Medicine and Surgery.

Rear Admiral J. C. Adams (MC) was recently honored by appointment to Honorary Commander of the Most Excellent Order of the British Empire in recognition of his contribution to the allied war effort while serving as chief of the Division of Aviation Medicine.

OFFICERS REQUEST POSTGRADUATE TRAINING

The advisory Board of the Bureau of Medicine and Surgery on March 24 approved the requests for postgraduate training of the following medical officers:

Capt. Charles L. Ferguson, Waynesville, N.C., course in internal medicine, University of Pennsylvania Graduate School of Medicine.
Capt. Edward S. Love, Long Beach, Calif., course in surgical anatomy, Cornell University Medical College.
Comdr. Peter J. Giotta, Bronx, N.Y., residency in ophthalmology, Naval Hospital, St. Albans, L.I., N.Y.
Comdr. Peter P. Machung, Nanticoke, Pa., extension course of instruction in neurology, Jefferson Hospital, Philadelphia.
Comdr. Waite B. Griswold, Indianapolis, fellowship, Illinois Psychiatric Institute.
Comdr. William S. Baker Jr., Detroit, second year of residency in obstetrics and gynecology, Naval Hospital, San Diego, Calif.
Comdr. Ross P. Black, Amarillo, Texas, course in basic science in urology, University of Pennsylvania.
Comdr. Nelse O. Olson of San Francisco, course in ophthalmology, Washington University, St. Louis.
Lieut. Comdr. August R. Boerkle, Pittsburgh, two year residency in orthopedic surgery, New York Orthopedic Dispensary and Hospital, Columbia University.
Lieut. Comdr. Wilbur S. Lemmie, Newark, N.J., residency in internal medicine at a Naval Hospital.
Lieut. Don L. Andrus, Arlington, Va., course in surgery, University of Pennsylvania Graduate School of Medicine.
Lieut. John W. Trenton, Petersburg, W. Va., residency in general surgery, Naval Hospital, St. Albans, L.I., N.Y.
Lieut. (jg) James F. Berry, Alexandria, Va., residency in internal medicine, Naval Hospital, Bethesda, Md.
Lieut. (jg) John W. Flynn, Washington, D.C., residency in internal medicine, Naval Hospital, Bethesda, Md.
Lieut. (jg) Martin Kooch III, Chicago, residency in surgery, Naval Hospital, Long Beach, Calif.
Lieut. (jg) Bruce F. Baisch, Little Valley, N.Y., residency in surgery, Naval Hospital, Bethesda, Md.
Lieut. (jg) Livius L. Lankford, Cisco, Texas, residency in orthopedic surgery, Naval Hospital, Philadelphia.
Lieut. (jg) Walter G. Leonard, Newton, Mass., residency in obstetrics and gynecology, Naval Hospital, Chelsea, Mass.

CORRECTION

Officers Request Graduate Training.--In the list of Naval medical officers under this head in THE JOURNAL, April 17, page 1054, Comdr. James W. Guntin Jr. should have been listed as taking a residency in surgery at the Naval Hospital, Long Beach, Calif., instead of at the Naval Hospital, St. Albans, N.Y.

VETERANS ADMINISTRATION

NUMBER OF PATIENTS AT ALL TIME HIGH

The number of veteran-patients hospitalized by the Veterans Administration reached the all time high of 109,325 on March 1, a gain of 1,874 over the previous peak of 107,451 on February 1. The number of veterans awaiting admission to hospitals also increased during February for the second straight month. The total on March 1 was 21,144, compared with 19,505 at the end of January and 4,329 in July 1945. The February increase was caused almost entirely by applications from veterans with nonservice-connected disabilities. Veterans Administration must provide medical care for veterans with service-connected ailments. Veterans with nonservice-connected disabilities may be hospitalized if beds are available and if they affirm that they cannot afford to pay for treatment elsewhere. Requests from veterans for physical examinations also reached an all time high on February 1 with a total of 256,000.

HOSPITAL AT OKLAHOMA CITY

President Truman and the Federal Board of Hospitalization have approved the acquisition of 9 acres of land in Oklahoma City for the site for a thousand bed Veterans Administration general hospital. The property adjoins Oklahoma University School of Medicine and the university hospital group. Locating the hospital on this site is in keeping with the Veteran Administration's policy of building large general hospitals close to medical schools and medical centers, so that the services of local medical personnel as residents, consultants and attendants may be available. All but three small parcels of land on the site are owned by the state of Oklahoma. The state's Board of Public Affairs has agreed to transfer its property, along with two of the privately owned lots on which it has options to purchase, to the Veterans Administration. The third privately owned lot will be acquired by the Veterans Administration.

HOSPITAL IN FORT WAYNE, IND.

On Sunday, February 29, ground-breaking ceremonies were conducted for the new Fort Wayne veterans' hospital, the construction of which is expected to start soon. The site of the two hundred bed general hospital is a 24 acre tract

VETERANS ADMINISTRATION HOSPITAL AT FORT WAYNE, IND.

adjacent to the site of the new Methodist hospital which is to be built in the near future. The main building of the veterans' hospital will be a five story concrete structure with exterior walls of brick. There will be also recreational facilities for patients, radios with head phones or special pillow receivers for each bed, an auditorium, classrooms, shops, libraries and other facilities.

SPECIAL SPEECH TRAINING

About 100,000 veterans of World War II who suffered speech impairments in service may be eligible for special restorative training, the Veterans Administration announced. This training, which is available for veterans under Public Law 16, generally will be offered in speech clinics of medical centers, hospitals, colleges and public schools; in private speech correction clinics, in curative workshops and in speech clinics operating as adjuncts to mental hygiene clinics. The training is available when the speech impairment interferes with the employment of the veteran, when his mental and physical condition is such that the training may be pursued satisfactorily and when there is good promise that special training will overcome or reduce significantly the veteran's handicap.

PHYSICIANS SEPARATED FROM SERVICE

MEDICAL CORPS OFFICERS RECOMMENDED FOR/OR RELIEVED FROM ACTIVE DUTY

NAME	CITY & STATE
Adsey, F.B.	Indianapolis, Ind.
Amateau, M.	New York, N.Y.
Amsterdam, B.	Newark, N.J.
Anderson, N.J.	North Branch, Minn.
Anderson, R.M.	Charleston, S.C.
Armstrong, C.D.	San Jose, Calif.
Arnett, R.E.	Lufkin, Tex.
Baggett, J.D.	Lillington, N.C.
Baker, E.A.	Winters, Calif.
Bailes, W.A.	Dermont, Pa.
Banister, G.B.	Port Chester, N.Y.
Baras, I.	Brooklyn, N.Y.
Borelli, P.A.	Coffeyville, Kans.
Borneby, G.A.	Simsbury, Conn.
Boros, P.	Rochester, N.Y.
Bortfeld, H.	New York, N.Y.
Bowman, T.E.	Salt Lake City, Utah
Breathcoup, L.A.	Rutland, Vt.
Brigbley, H.V.	Struthers, Ohio
Burg, A.M.	Brooklyn, N.Y.
Burgoon, P.S.	New Rochelle, N.Y.
Burides, L.F.	Homburg, La.
Burkeley, W.T. Jr.	Washington, D.C.
Buvil, H.H.	Beaumont, Tex.
Bloch, J.M.	Seymour, Ind.
Blankenship, H.D. Jr.	Jellico, Tenn.
Blesch, C.J. Jr.	New York, N.Y.
Bodnar, L.M.	Chicago, Ill.
Bohovoy, A.P.	Los Angeles, Calif.
Bouchard, G.J.	Manchester, N.H.
Boyer, R.S.	Philadelphia, Pa.
Bradford, B.R.	Bogota, N.J.
Brandt, I.K.	New York, N.Y.
Brennan, J.F.	Lakewood, O.
Brown, A.B. Jr.	Crockett, Tex.
Bucher, W.W.	Ridley Park, Pa.
Buchles, D.L.	Hartford City, Ind.
Buchsen, R.F.	Brooklyn, N.Y.
Bullard, A.L.	Statesville, N.C.
Bunker, R.J.	Caguas, P.R.
Burdeson, B.D. Jr.	Huntsville, Tex.
Burns, Ted	Salt Lake City, Utah
Bush, R.C.	West Hartford, Conn.
Byers, R.O.	Glenshaw, Pa.
Calvelli, G.J. Jr.	New York, N.Y.
Camp, H.V. Jr.	Warren, O.
Camp, R.J.	Aurora, Nebr.
Capossello, H.F.	Utica, N.Y.
Caputi, A.P.	Newport, R.I.
Carlson, K.E.	San Francisco, Calif.
Carter, S.H.	The Plains, Va.
Castleman, L.	Brooklyn, N.Y.
Chemeese, J.T.	Carlinville, Ill.
Chapel, J.P.	Houston, Tex.
Chapman, R.J.	Shenectales, N.Y.
Chappell, E.R.	Minden, Nebr.
Chilleg, E.R.	Buffalo, N.Y.
Churg, J.	New York, N.Y.
Civello, A.A.	San Francisco, Calif.
Clardy, E.K.	Hot Springs, Ark.
Clarkin, A.J. Jr.	Warwick, R.I.
Clayton, M.L.	Du Bois, Idaho
Clement, D.M.	Ann Arbor, Mich.
Cohen, R.B.	Bronx, N.Y.
Cole, J.W.	Eugene, Ore.
Coleman, F.B.	Indianapolis, Ind.
Colvell, B.D.	Honango, N.D.
Cortese, P.T.	Ware, Pa.
Costello, J.L.	Rutland, Vt.
Cotten, E.B.	Birmingham, Ala.
Cotten, R.T.	Manhattan, Kans.
Crispell, L.S.	Bridgeport, Conn.
Crook, G.E.	Yale, Okla.
Crone, W.C. Jr.	Jacksonville, Fla.
Crume, T.J. Jr.	Louisville, Ky.
Curtis, R.W.	Jefferson City, Mo.
Dabbs, O.D. Jr.	Gulfport, Miss.
Daniel, A.P.	Tiffin, O.
D'Aurio, T.F.	Greene Island, N.Y.
Davidson, A.	Burlington, Vt.
Davidson, J.R. III	Lithonia, Ga.
Davis, J.E.	Oklahoma City, Okla.
Davis, J.W. Jr.	Edenton, N.C.
Davis, W.A.	Pikeville, Ky.
Day, R.McC.	Summit, N.J.
Decker, A.M. Jr.	Brockport, N.Y.
Deininger, J.V.	San Francisco, Calif.
Dickinson, R.B.	Horatio, Ark.
Doyle, B.J.	La Salle, Ill.
Dugger, G.S.	Vilas, N.C.
Ecker, J.A.	Cleveland, O.
Edwards, D.G.	Salt Lake City, Utah
Eig, B.M.	Washington, D.C.
Ellis, W.P. Jr.	Laurel, Del.
Ellison, R.S.	Mansfield, O.
Epstein, I.	Washington, D.C.
Erb, E.R.	Port Washington, N.Y.
Fagan, P.T.	Terre Haute, Ind.
Fairall, E.R.	Hines, Ill.
Fawcett, R.A.	Wheeling, W. Va.
Fedullo, A.J.	Hazleton, Pa.
Fisher, R.M.	Chicago, Ill.
Fitzgerald, P.J.	Concord, N.H.
Fitzgerald, R.P.	New York, N.Y.
Fitzpatrick, W.J.	Balboa, Canal Zone
Flinchum, D.	Willis, Va.
Flinkman, L.	Philadelphia, Pa.
Flynn, R.E.	Albia, Ia.
Fountain, E.McA.	Houston, Tex.
Freedman, A.D.	Albany, N.Y.
Fulchino, N.L.	Revere, Mass.
Fuller, W.W.	Williamsburg, Va.
Fung, G.D.	San Francisco, Calif.
Galante, M.	New York, N.Y.
Gamble, T.J. Jr.	Los Angeles, Calif.
Geppert, T.V.	Vermillion, S.D.
Gilboy, J.T. Jr.	Youngstown, O.
Goldstone, S.B.	Olyphant, Pa.
Graham, L.S. Jr.	Pittsburgh, Pa.
Graub, M.	Philadelphia, Pa.
Greenhouse, H.M.	New York, N.Y.
Grieat, W.D.	Cincinnati, O.
Grime, J.A.	Warren, O.
Guthrie, W.W.	Huntington, W. Va.
Haas, H.S.	San Francisco, Calif.
Haddy, F.J.	Hollywood, Calif.
Haley, F.J.	Buffalo, N.Y.
Hamilton, A.	Yoakum, Tex.
Hartman, M.A.	Minneapolis, Minn.
Hendin, A.	St. Louis, Mo.
Hennessey, J.F.	Bayonne, N.J.
Hinke, D.H.	Madison, Wis.
Holt, C.Z.	Gruver, Tex.
Horvath, C.N.	Parma, O.
Howell, H.P.	Dayton, O.
Howland, W.S.	Wayne, Pa.
Huddleston, W.J.	Huntington, W. Va.
Huisenga, K.A.	Philadelphia, Pa.
Humphreys, W.F. Jr.	Sycamore, Ga.
Hurd, J.B.	Evanston, Ill.

V 1
194

Medical News

(Physicians will confer a favor by sending for this department items of news of general interest: such as relate to society activities, new hospitals, education and public health. Programs should be received at least two weeks before the date of meeting.)

ALABAMA

State Medical Elections.—At the annual meeting of the Medical Association of the State of Alabama in Mobile, April 15-17, Dr. J. Paul Jones, Camden, was elected president. Dr. Douglas L. Cannon, Montgomery, continues as secretary. The next annual meeting will be in Montgomery April 19-21, 1949.

Narcotic Violations.—The Bureau of Narcotics, Washington, D. C., has reported that two Alabama physicians pleaded guilty at Birmingham to information charging violation of the federal narcotic law. On February 27 Dr. William L. Drake, Fairfield, was fined $1,000 and placed on probation for five years, and on March 26 Dr. Robert B. Pryor, Mulga, was fined $2,000 and placed on probation for a period of three years.

CALIFORNIA

Society News.—The Los Angeles Society of Ophthalmology and Otolaryngology has elected Dr. Colby Hall, president, and Dr. Warren A. Wilson, secretary-treasurer.

Mental Health Institute.—A pilot institute on mental health for public health officers will be held in Berkeley July 5-16 under the auspices of the state department of public health and Commonwealth Fund. Lectures, seminars and supervised public health clinical experience in health department activities of the East San Francisco Bay region make up the program. Information may be obtained from the Director, California State Department of Public Health, San Francisco.

COLORADO

Rocky Mountain Cancer Conference.— The second Rocky Mountain Cancer Conference, sponsored by the Colorado State Medical Society, Rocky Mountain Cancer Foundation and Colorado Division of the American Cancer Society will be held at the Shirley-Savoy Hotel, Denver, July 14-15. Courses are designed particularly for the general practitioner. Among the speakers will be Fred W. Rankin, Lexington, Ky., on the colon and rectum; Herman L. Kretschmer, Chicago, urinary tract; Morris K. Barrett, Bethesda, Md., gastrointestinal tract; Alfred W. Adson, Rochester, Minn., brain and nervous system; Cly H. Hatcher, Chicago, bone; E. W. Alton Ochsner, New Orleans, lung; John H. Lawrence, Berkeley, Calif., isotopes; Richard H. Sweet, Boston, esophagus; John W. Budd, Los Angeles, laboratory diagnosis, and Archie C. Sudan, Denver, general practice. There is no registration fee as the conference is financed by contributed funds, mostly through the American Cancer Society.

FLORIDA

Personal.--Jesse Meuse, who has had many years of experience in the field of public health and teaching in public schools, has been appointed Negro health educator for the Florida State Board of Health. As a member of the division of health information he will work with various groups in the promotion of better health among the Negro population of the state.

State Medical Election.—Dr. Joseph S. Stewart, Miami, was installed as president of the Florida Medical Association at its annual meeting in St. Augustine April 11-14, and Dr. Walter C. Payne, Pensacola, was named president-elect. Dr. Robert D. McIver, Jacksonville, was reelected secretary-treasurer. The 1949 convention will be held at the Belleview Biltmore Hotel at Belleview.

Mobile Food Handlers School.--The Florida Food Handlers School program, which began in November 1947, is turning out about six hundred certified food handlers a month. Persons attending the mobile school must complete six hours' attendance before they receive their certificate as instructed food handlers. Thus far total attendance has been nearly 9,000. The school is a joint project of the Florida State Board of Health, Florida Hotel Commission and Florida Restaurant Association.

ILLINOIS

Dr. Huddleson Receives Bacteriologists' Award.—The Society of Illinois Bacteriologists at its spring meeting April 30 heard its first annual award lectureship delivered by I. Forest Huddleson, Ph.D., East Lansing, Mich., on "In Vitro and in Vivo Effect of Sulfadiazine and Normal Serum on the Brucella Antibody-Complement System." Dr. Huddleson was given the first annual award of the society for outstanding contributions to the science of bacteriology.

County Society Lectures.— Lectures arranged through the Scientific Service Committee of the Illinois State Medical Society include:

May 20, Harry H. Boyle, Chicago, Effingham County Medical Society, Effingham, Nephritis in Childhood.

May 27, Franklin J. Corper, Chicago, Will-Grundy County Medical Society, Joliet, Infant Feeding.

May 28, Eugene L. Walsh, Chicago, McDonough County Medical Society, Bushnell, Chronic Bronchitis.

June 1, Leo K. Campbell, Chicago, Vermilion County Medical Society, Management of Diabetes Mellitus Complicated by Surgical and Obstetric Emergencies.

Chicago

Personal.--Adaline C. Hayden, formerly executive secretary of the American Association of Medical Record Librarians, has joined the staff at headquarters of the American Medical Association as associate editor of the Standard Nomenclature of Diseases and Standard Nomenclature of Operations.

Medical Society Sponsors Two Graduate Courses.—The Chicago Medical Society will sponsor two postgraduate courses in Thorne Hall on the Northwestern University Medical School campus this fall. A course in hematology and neurology will be given September 13-18 and one on cardiovascular and respiratory diseases September 20-25, with authorities from various parts of the United States teaching. Enrolment is limited to one hundred for each course. Applications may be sent to the office of the Chicago Medical Society, 30 North Michigan Avenue, Chicago 2.

County Hospital Appointments.—Dr. Oscar Felsenfeld, formerly of the Mount Sinai Medical Research Foundation, Chicago, has been appointed director of bacteriology at Cook County Hospital. Dr. Felsenfeld has just returned from the Caribbean area, where he spent seven months in a study of intestinal infections. He was stationed in San Juan, Puerto Rico. Miss Viola Mae Young, M.S., who has been working on parasitology at the School of Tropical Medicine at San Juan, Puerto Rico, has been appointed parasitologist. This position was recently created by the Board of County Commissioners.

Tuberculosis Centers.—Eleven of Chicago's seventy-five community areas contributed more than half the 4,296 cases of tuberculosis reported last year to the city health department. Dr. Earl E. Kleinschmidt, director of the Tuberculosis Institute of Chicago and Cook County, said that in addition to the cases reported there were about 10,000 Chicagoans who were infected with the disease during the year. The area from which the most cases were reported, 532, or 12.4% of the city's total, is on the near west side bounded by Kinzie and Sixteenth Streets, from the river west to Rockwell Street. The second ranking area with 354 cases is bounded by Thirty-Ninth and Fifty-First Streets, Cottage Grove Avenue, and the tracks of the Rock Island Railroad.

INDIANA

Resigns as Treasurer at Ninety.—Dr. Charles Hupe, aged 90, has resigned as treasurer of the Tippecanoe County Medical Society, Lafayette, after serving forty-six years in that capacity. Dr. Hupe, who has practiced medicine for sixty-four years, attends nearly all the meetings of the county medical society.

Centennial Celebration.—The council of the Indiana State Medical Association has selected Sept. 26-29, 1949 as dates for the Centennial Celebration of the association. The meeting will be held at Indianapolis, and one feature will be a "History of the Indiana State Medical Association" being prepared under direction of Dr. Charles N. Combs, Terre Haute, and Dr. Edgar F. Kiser, Indianapolis.

IOWA

Courses in Speech and Hearing.—The State University of Iowa College of Medicine, Iowa City, will offer two special courses on conservation of hearing during the 1948 summer session. The first, a four week intensive course in audiometry and the fitting of hearing aids, open to any one who can meet college entrance requirements, will run from June 21 to July 17. The second, an advanced seminar open to graduate students who have completed a first course in audiometry or who have had experience in public school or clinical testing, runs for eight weeks beginning June 9. In addition, a series of four lectures and round table discussions will be presented.

LOUISIANA

University News.—Drs. Carl Merrill Whorton and Frank C. Womack will join the faculty of the Louisiana State University School of Medicine, New Orleans, July 1 as assistant professors of pathology. Dr. Whorton is at present associated with the Mallory Institute of Pathology at Boston City Hospital and is on the staff of Tufts College Medical School. He was graduated at Vanderbilt University School of Medicine, Nashville, Tenn., 1940. Dr. Womack is an instructor in pathology at the Vanderbilt University School of Medicine, Nashville, Tenn. He received his M.D. at Vanderbilt in 1941 and served in the Navy during the war. A grant of $15,364 has been received from the War Department for continuation of studies on bacitracin in the department of surgery. The investigation was inaugurated on July 1, 1947 on a previous grant of $15,222 from the same source. The National Cancer Institute, U. S. Public Health Service, has awarded to the Louisiana State University School of Medicine a grant of $19,941 effective July 1, 1948 for development of the teaching and research programs in cancer. Dr. Walter J. Burdette, assistant professor of surgery, has been designated coordinator of the cancer program.

MASSACHUSETTS

Annual State Medical Meeting.—The annual meeting of the Massachusetts Medical Society will be held May 25-27 at the Hotel Statler, Boston, under the presidency of Dr. Edward P. Bagg, Holyoke. Guest speakers at the general sessions include:

Sumner L. Koch, Michael L. Mason and Harvey S. Allen, all of Chicago, Purposeful Splinting Following Injuries to the Hand.
Norman M. Jolliffe, New York, Nutrition in the Practice of Medicine.
Sir Reginald Watson-Jones, London, England, Significance of Rehabilitation in Medicine.
Robert B. Lawson, Winston-Salem, N.C., Recent Concepts on the Spread and Treatment of Poliomyelitis.
William S. Stone, M.C., U.S.A., Washington, D.C., Military Medical Preparations for the Future.
J. Rudolph Jaeger, Philadelphia, Subdural Hematoma.
Meyer Sahlad, Providence, R.I., Operative Morbidity—Whose Responsibility?
Inglis F. Frost, New York, Endometriosis.
Eugene F. Traub, Burlington, Vt., Cutaneous Malignancies and Nevi.
Emery A. Rovenstine, New York, Management of Surgical Pain.
Hon. Forrest A. Harness, Kokomo, Ind., Government Propaganda and Socialized Medicine.

Guest speakers for the symposium on Liver Diseases Wednesday afternoon will be:

Henry G. Kunkel, New York, Liver Function Tests.
John R. Neefe, Philadelphia, Viral Hepatitis.
Stanley E. Bradley, New York, Variations in Hepatic Blood Flow.

The annual oration will be delivered by Dr. Allen S. Johnson, Springfield, Tuesday on "Responsibility of Medicine in the Propagation of Poor Protoplasm." The Shattuck Lecture will be given by Dr. C. Stuart Welch, Boston, on "Surgery in the Aged," on Tuesday evening at 8 p.m.

The guest speaker at the annual dinner Wednesday at 7 p.m. will be Mary Ellen Chase, Ph.D., Northampton, whose subject will be "The Country Doctor on the Maine Coast."

MICHIGAN

Hearing Testing Trailer.—The Michigan Department of Health has equipped a trailer to test hearing for use in its Hearing Conservation Program to school children in rural areas of the state. The 21 foot trailer has two rooms, one for controls and the other soundproofed for testing. More than 250,000 Michigan children have been tested for hearing loss under the Hearing Conservation Program since it was begun in 1942.

MINNESOTA

Chest X-Ray Survey in St. Paul.—During the chest x-ray survey carried out in St. Paul between October 22 and December 13, 1947, 594 cases of tuberculosis were discovered among 129,401 persons examined. The survey was conducted by the U. S. Public Health Service. St. Paul was the second of ninety-two cities of 100,000 or more population to take advantage of the offer. Twelve x-ray units were brought to St. Paul by the U. S. Public Health Service. Of patients whose tuberculosis was discovered by the roentgen examination and laboratory follow-up, 90 per cent were in the early stages of the disease.

Annual State Medical Meeting.—The Minnesota State Medical Association will meet in annual session at the Minneapolis Auditorium, Minneapolis, June 7-9, under the presidency of Dr. Archibald C. Cardle. A clinical-pathologic conference on cardiovascular-renal diseases and two panel discussions make up the opening general session program. The Russell D. Carman Memorial Lecture will be given by Dr. Paul C. Hodges, Chicago, on "The Role of X-Ray Pelvimetry in Obstetrics" Monday

V 1
194

afternoon. The clinical-pathologic conference on Tuesday will be on acute abdominal pain, followed by panel discussions on nutrition in surgery and antibiotics. The Pediatrics Lecture on "St. Louis Encephalitis" will be delivered by Russell J. Blattner, Houston, Texas. On Wednesday's program there are a clinical-pathologic conference on uterine bleeding and the Arthur H. Sanford Lecture in Pathology by Benjamin J. Clawson, Minneapolis, on "Rheumatic and Bacterial Endocarditis." The general sessions will conclude with a public health meeting; among the speakers will be Senator Joseph H. Ball, on "National Health Legislation"; Robert L. Novy, Detroit, "Budgeting for Health Care," and Dr. Morris Fishbein, Editor of THE JOURNAL, on "Teamwork in the Conservation of Human Resources." A series of twenty-one round table discussions, each limited to forty, have been arranged, and scientific motion pictures will be shown each day. The annual dinner will be held at 7 p.m., June 8. The Physicians' First Annual Hobby Show will be held at the auditorium all during the convention. The Woman's Auxiliary will meet in conjunction with the state association.

NEW JERSEY

Research on Cell Growth.--Two recent grants totaling $71,450 from the New Jersey Division of the American Cancer Society, Inc., will be used at Princeton University, department of biology, Princeton, to conduct research on cell growth.

Personal.--Dr. William C. Williams, Rutherford, has been awarded the Russell Loines Memorial Award for Poetry of the National Institute of Arts and Letters. The award of $1,000 will be presented May 21 at the Academy Auditorium in New York. Dr. Williams, according to the *New York Times*, was recently appointed consultant of poetry in English by the Library of Congress.

NEW YORK

Receives Kaiser Medal.--The 1948 Albert David Kaiser Medal for outstanding medical service was awarded to Dr. John Aikman, assistant professor of pediatrics, University of Rochester School of Medicine and Dentistry, at a meeting of the Rochester Academy of Medicine May 4. Dr. Aikman has been in practice in Rochester for more than thirty years. He formerly served as chairman of the Section on Pediatrics of the American Medical Association.

Institute on Diarrhea of Newborn.—A regional Institute on Diarrhea of the Newborn will be held in the Buffalo Children's Hospital, Buffalo, May 24, 10:30 a.m. Sponsored by the Medical Society of the State of New York and the New York State Department of Health, the institute will serve the counties of Erie, Niagara, Chautauqua, Genesee and Wyoming. Hospital administrators, obstetricians and pediatricians, obstetric and pediatric nurses, laboratory directors and full time public health officers are invited to attend.

New York City

Harvey Lecture.—Dr. Frank A. Beach, professor of psychology, Yale University School of Medicine, New Haven, Conn., will deliver the eighth Harvey Lecture at the New York Academy of Medicine May 20, on "Nervous and Hormonal Mechanisms in Sexual Behavior."

Dr. Glenn Appointed Stimson Professor of Surgery.—Dr. Frank Glenn, assistant professor of clinical surgery, has been appointed Louis Atterbury Stimson professor of surgery at Cornell University and surgeon in chief of the New York Hospital to succeed Dr. George J. Heuer, who will retire. Dr. Glenn is a graduate of Washington University School of Medicine, St. Louis, and has been on the faculty at Cornell since 1932. He is the last of the Gorham Peters traveling fellows appointed by Dr. Harvey Cushing.

Dr. Price Retires from Department of Hospitals.--Dr. Thomas J. Price, general medical superintendent, Department of Hospitals, retired April 16 after thirty-nine years' service to the municipal hospitals. Employees of the central office of the department honored Dr. Price at a reception. A testimonial dinner also was held. During World War I he was assigned to the Army Medical College from 1915 to 1917; later, he became head of the Central Neurological Hospital. In 1922 he organized the New York City Cancer Institute with the late Dr. Isaac Levine, cancer specialist. He was medical superintendent of City Hospital on Welfare Island from 1938 to 1944 and on Feb. 1, 1944 was appointed general medical superintendent by Commissioner Edward M. Bernecker, M.D.

Doctor Composes Music for Doctors' Orchestra.--The Doctors' Orchestral Society of New York gave its annual concert at the Hunter College Auditorium on May 13. This symphonic group of seventy doctors, dentists and members of allied professions plays each year for some worthy benefit. This year the proceeds go to the charitable and educational program of the Physicians' Wives League of Greater New York. The feature of this concert was the world premiere of an orchestral suite called "The Hospital" composed by Dr. Herman H. Parris, University of Pennsylvania, Philadelphia, who has been composing orchestral and instrumental works for many years. "The Hospital" is written in ten movements depicting the reactions of a young woman who enters the hospital for an appendectomy. Her reactions at the information desk, with the nurse, the intern and the surgeon, and at the preoperative prayer, are described musically.

NORTH DAKOTA

Annual State Medical Meeting.—The North Dakota State Medical Association will meet in the Jamestown Armory, Jamestown, May 22-25 under the presidency of Dr. Philip G. Arzt of that city. The guest speakers will be:

Erling V. Hanson, Minneapolis, Stevens Johnson Syndrome.
John P. Coffey, New York, Roentgen Changes in Primary Tuberculosis.
Allan C. Barnes, Columbus, Ohio, Use of Female Sex Hormones in Clinical Practice.
Philip K. Arzt, St. Paul, Psychosomatic Medicine in General Practice.
Arthur Abt, Chicago, Diagnosis of Poliomyelitis.
Mavis P. Kelsey, Deport, Texas, Diagnosis and Treatment of Thyroid Disease.
Malcomb B. Docherty, Rochester, Minn., Ovarian Neoplasms.

The annual banquet will be at the country club on Monday at 7 p.m. The Woman's Auxiliary will meet in conjunction with the state society.

OREGON

Southern Oregon Medical Society.—The annual meeting of Southern Oregon Medical Society will be held June 1 at the Oregon Caves Chateau near Grants Pass. Subjects under discussion include industrial accident commission practice and problems, newer concepts of electrocardiography in coronary artery disease, outlook for American medicine, obstetric problems met in premature labor, erythroblastosis and common surgical diseases of children. Members of the Oregon State Medical Society are invited. Reservations may be made by writing to the Oregon Caves, U. S. National Bank Building, Grants Pass.

PENNSYLVANIA

Survey of Public Health Activities.—The Pennsylvania Department of Health has requested the American Public Health Association to survey the public health activities of Pennsylvania. This survey was recommended last year by the Medical Society of the State of Pennsylvania. Important among the aspects of this survey will be the efficiency, scope and effectiveness of (1) the state department of health, (2) health service to local communities and (3) the relation of the state and local departments of health to voluntary agencies. A committee of public-minded citizens, to be appointed by Governor Duff, will serve in an advisory capacity. Dr. Roscoe P. Kandle, New York, field director of the American Public Health Association, is directing the study.

Philadelphia

Appoint Vice President and Deans of University.—Dr. Robin C. Buerki, dean of the Graduate School of Medicine and director of hospitals at the University of Pennsylvania School of Medicine, has been elected vice president of the university in charge of medical affairs. He will succeed A. Newton Richards, Ph.D., LL.D., who will retire after thirty-eight years of service. Dr. John McK. Mitchell has been elected dean of the School of Medicine as the successor of Dr. Isaac Starr, who asked to be relieved of administrative duties. Dr. William S. Parker will succeed Dr. Buerki as dean of the Graduate School of Medicine. A member of the medical faculty of the university since 1936, Dr. Parker has been assistant dean of the Graduate School of Medicine for two years.

TENNESSEE

State Medical Election.--At the annual meeting of the Tennessee State Medical Association in Nashville April 13-15, Dr. Hurley W. Qualls, Memphis, was installed as president and Dr. Nathaniel S. Shofner was named president-elect. Dr. William M. Hardy, Nashville, will continue as secretary.

Honor Dr. Hyman.—A portrait of Dr. Orren W. Hyman, dean of administration of the Memphis Division, University of Tennessee, Memphis, was presented to the university February 11, the gift of medical alumni and friends. Dr. Hyman received his LL.D. in 1938 from Southwestern College, Memphis. He has been with the University of Tennessee since 1913 and has been dean of administration and dean of medicine since 1925.

UTAH

Cancer Symposium.—A symposium covering advances in cancer etiology, diagnosis and therapy will be given May 28-29 at the University of Utah School of Medicine, Salt Lake City. Principal speakers include Dr. Austin V. Deibert, U.S. Public Health Service, Washington, D.C.; Dr. Frank B. Queen, Portland, Ore.; Dr. David A. Wood, San Francisco, and Dr. Andrew H. Dowdy, Los Angeles.

WASHINGTON

Appoint Professor of Obstetrics.—Dr. Russell R. DeAlvarez-Skinner, Portland, Ore., has been appointed professor of obstetrics and gynecology at the University of Washington School of Medicine, effective July 1. A graduate of the University of Michigan Medical School, Ann Arbor, he became instructor in the department of obstetrics and gynecology in 1938 and for several years served as consultant for the State of Michigan under the University's School of of Post-graduate Medical Education. Following service in the navy in the recent war, he engaged in private practice in Portland. Dr. Gordon G. Thompson, Seattle, has been appointed clinical professor of obstetrics and senior consultant in this department.

GENERAL

Society Elections.—The American Society for Pharmacology and Experimental Therapeutics, Inc., at the annual meeting March 16 in Atlantic City, N. J., elected Dr. Carl A. Dragstedt, Chicago, president, and Dr. Harvey B. Haag, Richmond, Va., secretary.

Headquarters of Academy of General Practice.—The American Academy of General Practice, organized a year ago at the convention of the American Medical Association, has established national headquarters at 231 West Forty-Seventh Street, Kansas City, Mo., with Mac F. Cahal, acting executive secretary.

Joint Orthopedic Meetings in Quebec.--The first combined meeting of the American, British and Canadian orthopedic associations will meet June 3-6 in Quebec, Canada. In addition to numerous papers by members of the associations, the speakers will include Drs. Malcolm B. Dockerty, Rochester, Minn.; Sten Friberg, Stockholm, Sweden; Philip C. Trout, Roanoke, Va.; Mary S. Sherman, Chicago, Ill.; Fuller Allbright, Boston; Arthur W. Ham, Toronto; William V. Cone, Montreal; and Kenneth G. McKenzie, Toronto. The Saturday afternoon program will be a round table discussion on undergraduate teaching in orthopedic surgery.

Section Meeting of Pathologists.—The Middle Eastern Region of the College of American Pathologists will meet in Washington, D.C., May 24-25 with headquarters at the Medical Society of the District of Columbia. The meeting is jointly sponsored by the local society of pathologists and the Section on Pathology and Laboratory Medicine of the district medical society. Various portions of the program are scheduled for the Naval Hospital, Bethesda, Md., Walter Reed General Hospital and the U.S. Public Health Service. Reservations should be sent to the Mayflower Hotel. Registration is open to all pathologists and other interested physicians. An attendance fee of $1 will be charged.

Gastroenterological Association.--The National Gastroenterological Association will hold its thirteenth scientific session in New York June 7-10. The program for the first three days will be at the Hotel Pennsylvania and will consist of symposiums on gastroduodenal ulcer; ulcerative colitis; jaundice and metabolism, and nutrition and allergy. The panel discussion will be followed by a " question and answer " period. At the banquet Tuesday evening, the winner of the National Gastroenterological Association's 1948 Cash Prize Award Contest for the best unpublished contribution on gastroenterology will be announced. Details may be obtained by writing to the Secretary, National Gastroenterological Association, 1819 Broadway, New York 23.

Science Writing Awards.--Competition for the George Westinghouse Science Writing Awards will terminate in July. The awards consist of two $1,000 grants, one to the author of the best newspaper science writing and the other to the writer whose work appears in a magazine of general circulation. The awards are administered by the American Association for the Advancement of Science from a grant by the Westinghouse Educational Foundation. Entries for this year's two awards must have been published in a newspaper between Oct. 16, 1947 and July 31, 1948 or in a magazine between October 1947 and July 1948. All entries must be in the judges' hands at the American Association for the Advancement of Science, 1515 Massachusetts Ave. N.W., Washi gton, D.C., by August 9.

Clinical Surgeons Annual Meeting and Tour.—The Southern Society of Clinical Surgeons will hold its eighteenth annual meeting at the Palmer House, Chicago, May 26, under the presidency of Dr. Emmett B. Frazer, Mobile, Ala. Subjects to be presented include heparinemia and hemorrhage, surgery of the stomach and the gallbladder, diagnosis of surgical jaundice and of congenital malformations of the heart amenable to surgical treatment. After a visit to the Veterans Hospital, Hines, Ill., the group leaves for Los Angeles, where they will attend sessions at the Los Angeles County Hospital; then on to Honolulu, where they will remain for a week during which the Honolulu Surgical Society will present a program. The group returns to San Francisco June 14, then goes to Portland, Seattle, Vancouver, Lake Louise, Banff and Winnipeg, participating in hospital clinics at various stops. They will return to St. Paul June 30.

Pan American Association of Ophthalmology.—Dr. Conrad Berens, New York, was elected president of the Pan American Association of Ophthalmology at the third Pan American Congress in Havana, Cuba, January 4-10. The next congress will be held in Mexico City in 1952. The Pan American Association of Ophthalmology was established as a continuing organization of the Western Hemisphere to promote measures to conserve eyesight and prevent blindness. The statutes provide for an Inter-American Federation of Ophthalmologic Societies and for a Bureau of Professors of Ophthalmology, who are to encourage the formation of centers for graduate study, to effect interchanges of professors and alumni among teaching centers, to arrange for and manage prizes and scholarships and to arrange for examinations and issue certificates of proficiency to physicians who seek them. The bureau's activities are not intended to interfere with independent examining boards already functioning efficiently.

American Surgical Association.—The American Surgical Association will meet at the Chateau Frontenac, Quebec, Canada, May 28-29 under the presidency of Dr. W. Edward Gallie, Toronto, Canada. In addition to numerous papers by members of the association, those invited to present papers are Warren H. Cole, Chicago; John H. Mulholland, New York; Laurence S. Fallis, Detroit; Frank H. Lahey, Boston; Frederick A. Coller, Ann Arbor, Mich.; Everett I. Evans, Richmond, Va.; Joe V. Meigs, Boston; Charles Huggins, Chicago; George M. Curtis, Columbus, Ohio; Ralph Colp, New York; Clarence Dennis, St. Paul; Gustav E. Lindskog, New Haven, Conn; George H. Yeager, Baltimore; Earle B. Mahoney, Rochester, N.Y.; Roy D. McClure, Detroit; Bradley L. Coley, New York; Jacob Fine, Brookline, Mass.; Howard C. Naffziger, San Francisco; Howard A. Patterson, New York; Loyal Davis, Chicago; John D. Stewart, Buffalo; Alfred Blalock, Baltimore; John S. Lockwood, New York; Lester R. Dragstedt, Chicago, and John H. Gibbon Jr., Philadelphia. There will be a formal dinner May 28 at 7:30 for fellows and guests of the association.

Awards in Mental Hygiene.—The 1948 Lasker Award of $1,000 for outstanding service in mental hygiene will be presented for a significant contribution to the education of the nonpsychiatric medical practitioner in the psychologic aspects of the practice of medicine. The work of candidates for the award must have been accomplished or generally accepted during the past year of two. Presentation of the award will be made at the annual meeting of the National Committee for Mental Hygiene, November 3-4 in New York. Any one may submit nominations, which should be forwarded by September 1 to the National Committee for Mental Hygiene, 1790 Broadway, New York 19.

National Safety Contest Winners.—The National Safety Council announced April 15 the winners in the National Traffic Safety Contest conducted by the council, in which six hundred and twenty-two cities of more than 10,000 population and forty-eight states participated. Oklahoma City and Wilmington, Del., tied for the grand award among the cities with a program which resulted in a reduction of 44 and 69 per cent, respectively, in 1947 traffic deaths as compared with 1946. Among cities of 500,000 and over Cleveland placed first, with Detroit and Washington, D. C., in second and third place. Oklahoma city won and Seattle placed second in the 200,000 to 500,000 class. Flint, Mich., placed second to Wilmington, Del., in the 100,000 to 200,000 group. In cities of 50,000 to 100,000 St. Joseph, Mich., won first place and Lakewood, Ohio, second. Dubuque, Iowa, was first in the 25,000 to 50,000 group with only two traffic deaths in 1947. Logan, Utah, won in the 10,000 to 25,000 group and maintained its previous two year record of no fatalities. Stillwater, Okla., second to Logan, completed its eighth year without a traffic fatality in 1947. Connecticut was the winner of the grand award for states with a mileage death rate (deaths per hundred million vehicle miles) of 4.3, half the national rate. Massachusetts and New Jersey tied for second place in the Eastern division. Virginia, Texas and Oklahoma, in that order, were winners of the Southern division, and Washington far outclassed other states in the Western region.

GREAT BRITAIN

International Postgraduate Courses.—Roffey Park Rehabilitation Centre, Horsham, Sussex, is presenting international postgraduate courses on social and industrial psychiatry from June 28 to September 26. The first course extends from June 28 to July 4, the second from August 9 to 15, the third from August 23 to 29 and the last from September 20 to 26. Lectures and tours of rehabilitation centers make up the program. Accommodations for each course are limited to twenty-four persons, who will reside in a club on the estate. The fee, which covers tuition, residence and social activities, is $50. Early application for vacancies should be made to the Secretary, Roffey Park, Horsham, Sussex, England. Checks should be made payable to Roffey Park Rehabilitation Centre, Barclays Bank (Dominion, Colonial and Overseas), 120 Broadway, New York.

CORRECTIONS

Dr. Spurr Appointed Director of Hospital Clinic.—Dr. Charles L. Spurr, formerly on the faculty of the University of Chicago, has been appointed internist and director of the clinic at the M.D. Anderson Hospital for Cancer Research, Houston, Texas, not director of the hospital as stated in THE JOURNAL, April 17, page 1057.

Report of Officers.—In THE JOURNAL, May 8, among the "Reports of Officers," portions of other bureau reports were interposed between the two portions of the report of the Bureau of Health Education. On page 166, column 2, the report of the Bureau of Health Education apparently ends in the midst of a paragraph relating to "Pamphlets." This copy is continued on page 175, column 1, with the fourth paragraph which begins on that page, and it continues through to the end of the report of the Bureau of Health Education near the bottom of the second column of page 175. The latter portion of the report of the Bureau of Health Education was erroneously included in the report of the Bureau of Medical Economic Research.

Deaths

Neil Dugald Buie ● Marlin, Texas; born in Scotland, Ark., April 11, 1879; Vanderbilt University School of Medicine, Nashville, Tenn., 1907; past president of the State Medical Association of Texas and the Falls County Medical Society; member and past president of the Federation of State Medical Boards of the United States; for many years member of the state board of medical examiners; member of the Association of Military Surgeons of the United States; fellow of the American College of Physicians; specialist certified by the American Board of Internal Medicine; member and past president of the local school board; member and past president of the Marlin Chamber of Commerce; past president of the East Texas Chamber of Commerce, of which he had been director and divisional vice president; owner of a hospital; chairman of the Falls County Foundation for Crippled Children; for many years health editor of the *Texas Outlook*; died February 9, aged 68, of heart disease.

Fred William Gaarde ● Rochester, Minn.; born in Minden, Neb., June 20, 1887; Rush Medical College, Chicago, 1912; an instructor in medicine at his alma mater and an assistant on the attending staff at Presbyterian Hospital in Chicago from 1914 to 1920; joined the Mayo Clinic as an associate in medicine on Sept. 1, 1920; associate professor of medicine at the Mayo Foundation, where he served as head of a section of medicine and later as senior consultant in that section; a major in the medical corps of the American Expeditionary Forces during World War I; specialist certified by the American Board of Internal Medicine; fellow of the American College of Physicians; member of the Institute of Medicine of Chicago, the Society of Internal Medicine of Chicago, Central Clinical Research Club and the Minnesota Society of Internal Medicine; died February 10, aged 60, of coronary insufficiency.

William Thompson Briggs ● Lexington, Ky.; born in Nashville, Tenn., Aug. 19, 1881; Vanderbilt University School of Medicine, Nashville, 1909; past president of the Fayette County Medical Society; member of the American Urological Association; fellow of the American College of Surgeons; specialist certified by the American Board of Urology; served during World War I; formerly a member of the faculty of his alma mater; for many years associated with the Lexington Clinic; on the staffs of Veterans Administration Hospital, Good Samaritan Hospital and St. Joseph's Hospital; formerly associate editor of the *Nashville Medical and Surgical Journal*, which later became the *Journal of the Tennessee State Medical Association*; died in St. Joseph's Hospital February 1, aged 66.

Walter Barclay Mount ● Montclair, N.J.; born Feb. 5, 1880; Columbia University College of Physicians and Surgeons, New York, 1905; specialist certified by the American Board of Obstetrics and Gynecology, Inc.; member of the American Association of Obstetricians, Gynecologists and Abdominal Surgeons and of the American Clinical and Climatological Association; fellow of the American College of Surgeons; served as secretary of the Society of Surgeons of New Jersey and as second vice president of the Essex County Medical Society; an officer serving during World War I; for many years affiliated with the Mountainside Hospital and the Montclair Community Hospital; died February 10, aged 68, of coronary occlusion.

John Alexander McCreery ● New York; born in New York Oct. 19, 1885; Columbia University College of Physicians and Surgeons, New York, 1910; served as associate clinical professor of surgery at his alma mater; member of the founders group of the American Board of Surgery; member of the American Surgical Association; fellow of the New York Academy of Medicine and the American College of Surgeons; past president of the New York Surgical Society; served in France with the British and American Expeditionary Forces during World War I; for many years affiliated with Bellevue Hospital and the Greenwich (Conn.) Hospital, where he died January 31, aged 62, of pneumonia.

Charles Hume Baldwin ● Utica, N. Y.; born in Medford, Mass., Dec. 23, 1876; Harvard Medical School, Boston, 1904; member of the American Academy of Orthopedic Surgeons and the Utica Academy of Medicine; fellow of the American College of Surgeons; served during World War I; chief of staff at the Children's Hospital Home since its founding; chief of staff of the Utica Dispensary and on the staffs of St. Elizabeth, St. Luke's and Faxton hospitals; visiting physician at the Pine Crest Sanatorium in Salisbury Center, and the Broadacres Sanatorium; died in Sanford, Fla., January 26, aged 71, of coronary thrombosis.

Hovsep Garo Adams, Fresno, Calif.; Boston University School of Medicine, 1914; affiliated with the St. Agnes Hospital, where he died January 28, aged 62, of heart disease.

Orville Lewis Adams, Aberdeen, Wash.; Rush Medical College, Chicago, 1906; member of the American Medical Association; served during World War I; affiliated with St. Joseph's Hospital; died January 28, aged 68, of intestinal hemorrhage.

Alex Echel Bryan Alford ● Bainbridge, Ga.; Columbia University College of Physicians and Surgeons, New York, 1909; medical director and owner of the Bainbridge Hospital; died January 14, aged 72.

H. Melvin Allen, Mount Penn, Pa.; Medico-Chirurgical College of Philadelphia, 1894; veteran of the Spanish-American War; on the staff of the Philadelphia General Hospital; died January 11, aged 78, of auricular fibrillation.

Nathan Johnson Bicknell ● Detroit; University of Toronto Faculty of Medicine, Toronto, Canada, 1920; died in Harper Hospital January 28, aged 52, of hypertensive renal disease.

Oscar Henry Bohn ● Yonkers, N.Y.; Columbia University College of Physicians and Surgeons, New York, 1901; past president of the Yonkers Academy of Medicine; formerly member of the board of education; served on the staff of St. Joseph's Hospital; died in the Yonkers Professional Hospital January 28, aged 70, of intestinal obstruction.

John Calhoun Boone, South Bend, Ind.; University of Louisville (Ky.) Medical Department, 1895; member of the American Medical Association; veteran of the Spanish-American War; served in France during World War I; died January 11, aged 82, of coronary thrombosis.

Bruce Hardy Brown, San Ysidro, Calif.; Barnes Medical College, St. Louis, 1910; served with the U.S. Department of Interior, in the medical Corps of the U.S. Army during World War I and two years with the U.S. Public Health Service; veteran of the Spanish-American War; died January 22, aged 66, of cerebral hemorrhage and hypertension.

Charles Wilson Conley ● Columbus, Ohio; Eclectic Medical Institute, Cincinnati, 1895; Rush Medical College, Chicago, 1898; died in St. Francis Hospital January 28, aged 81, of cerebral hemorrhage.

Willis Frank Cotten ● McComb, Miss.; University of Virginia Department of Medicine, Charlottesville, 1928; specialist certified by the American Board of Otolaryngology; served during World War I; past president of the Pike County Medical Society; affiliated with the McComb City Hospital and McComb Infirmary; served as president of the Chamber of Commerce, died in Baptist Hospital, New Orleans, January 19, aged 49.

James Rea Cowan, Van Nuys, Calif.; University of Southern California School of Medicine, Los Angeles, 1909; died January 19, aged 66.

Elijah Matthew Craighead Jr., Kimball, W. Va.; Meharry Medical College, Nashville, Tenn., 1928; assistant surgeon at the Welch Emergency Hospital; died in Lakin January 16, aged 43, of pneumonia.

Frederick Ellery Cruff, Norwell, Mass.; Harvard Medical School, Boston, 1920; member of the American Medical Association; served during World War II; died January 18, aged 55, of coronary thrombosis.

Paul Quincy Daniel, Grundy, Va.; Medical College of Virginia, Richmond, 1933; died in the Clinch Valley Clinic Hospital, Richlands, January 30, aged 41, of cirrhosis of the liver.

Eugene B. Dewees, Caneyville, Ky.; Hospital College of Medicine, Louisville, 1905; served as a member of the city and county board of education; died January 21, aged 68, of heart disease.

George Washington Dunn ● New Britain, Conn.; Baltimore Medical College, 1909; past president of the Hartford County Medical Society; specialist certified by the American Board of Surgery; fellow of the American College of Surgeons; affiliated with the New Britain General Hospital, where he died January 31, aged 59, of cirrhosis of the liver and pernicious anemia.

Robert H. Flader, Webster Groves, Mo.; Missouri Medical College, St. Louis, 1897; died in the Deaconess Hospital, St. Louis, January 29, aged 73.

John W. Frizzell, Pasadena, Calif.; Homeopathic Hospital College, Cleveland, 1884; died January 19, aged 93, of bronchopneumonia.

Edward Henry Ganley ● Methuen, Mass.; Tufts College Medical School, Boston, 1917; served during World War I; member of the Selective Service Board during World War II; affiliated with the Clover Hill and Lawrence General hospitals in Lawrence; formerly town physician; died January 23, aged 56, of congestive heart disease.

Lester Pierpont Gerrish ● Lisbon Falls, Maine; Harvard Medical School, Boston, 1904; past president of the Maine Medical Association and of the Androscoggin County Medical Society; died recently, aged 72.

Andrew J. Glover, Guy, Ark. (licensed in Arkansas in 1903); past president of the Faulkner County Medical Society; died January 23, aged 78, of cerebral hemorrhage.

William Gregory Gunn ● Versailles, Mo.; Barnes Medical College, St. Louis, 1909; fellow of the American College of Chest Physicians; died January 2, aged 62, of coronary thrombosis.

Allen P. Gurganious ● Palatka, Fla.; St. Louis University School of Medicine, 1931; president of the Putnam County Medical Society; served during World War II; died in Elkton January 28, aged 41, of injuries received in an automobile accident.

George W. Haan ● Aurora, Ill.; Illinois Medical College, Chicago, 1900; formerly city health commissioner; died in the Mercyville Sanitarium February 9, aged 83, of cerebral thrombosis.

Mary Gertrude Halton, New York; Cooper Medical College, San Francisco, 1900; member of the American Medical Association; died in Doctors Hospital January 25, aged 69, of pulmonary tuberculosis and pancreatic cyst.

John Ryland Harlow, Jonesboro, La.; University of Arkansas School of Medicine, Little Rock, 1935; interned at the Shreveport Charity Hospital in Shreveport; served overseas during World War II; died in a Kansas City, Mo., hotel February 7, aged 37, of pulmonary tuberculosis, cirrhosis of the liver and acute nephritis.

Edmund Henry Hedges ● Lima, Ohio; St. Louis University School of Medicine, 1918; specialist certified by the American Board of Urology, Inc.; member of the American Urological Association; fellow of the American College of Surgeons; affiliated with Lima Memorial Hospital and St. Rita's Hospital, where he died February 11, aged 53, of coronary thrombosis.

George W. Heriot Sr., Savannah, Ga.; Atlanta Medical College, 1895; once served as city physician; died January 4, aged 79.

Verner George Heseltine, Taylors Falls, Minn.; L. R. C. P., London, and M. R. C. S., England, 1904; died in St. John's Hospital, St. Paul, Dec. 8, 1947, aged 71, of heart disease.

Patrick John Heston, Scranton, Pa.; College of Physicians and Surgeons, Baltimore, 1906; deputy county coroner; director of the women's division of the Pennsylvania State Sanatorium for Tuberculosis in Hamburg; on the staffs of the Mercy Hospital and State Hospital, where he died January 29, aged 61.

Frederick William Heyer ● Nanticoke, Pa.; Medico-Chirurgical College of Philadelphia, 1912; specialist certified by the American Board of Surgery; member of the Radiological Society of North America, Inc.; fellow of the American College of Surgeons; chief surgeon at the Nanticoke State Hospital; died suddenly January 7, aged 61.

Joseph Howard Hodges, Martinsburg, W. Va.; University of Maryland School of Medicine, Baltimore, 1908; affiliated with the City Hospital; director and vice president of the Jefferson Security Bank of Shepherdstown, W. Va.; for many years medical examiner for the Baltimore and Ohio Railroad; died January 7, aged 65, of coronary thrombosis.

Walter Bayard Huey ● Joliet, Ill.; Rush Medical College, Chicago, 1903; fellow of the American College of Surgeons; past president of the Will-Grundy Counties Medical Society; served as a member of the board of trustees of the Will County Tuberculosis Sanatorium; on the staff of Silver Cross Hospital, where he died January 25, aged 69, of arteriosclerosis and cerebral hemorrhage.

Virgil B. Jackson ● Washington, D. C.; Columbian University Medical Department, Washington, D. C., 1894; an Affiliate Fellow of the American Medical Association; fellow of the American College of Surgeons; member of the medical advisory board during World War I; at one time police surgeon; for many years on the faculty of his alma mater and on the staffs of George Washington University Hospital and Emergency Hospital, where he died February 15, aged 79, of prostatitis and renal calculi.

George Berlin Jastram ● Aberdeen, Md.; Jefferson Medical College of Philadelphia, 1939; died January 31, aged 34, of cerebral hemorrhage.

Foreign Letters

PARIS

(From Our Regular Correspondent)

March 15, 1948.

Penicillin in Malignant Endocarditis Lenta

At a recent meeting of the French Society of cardiology, devoted to malignant endocarditis lenta, E. Donzelot, H. Kaufmann and J. Escalle reported 405 cases of this disease with treatment at the cardiologic clinic of the Broussais hospital. They classified these cases as of three types: (1) those with positive hemocultures; (2) those with negative hemocultures (25 per cent of the cases) and with parenchymatous lesions of the kidneys, spleen, liver and myocardium (in these cases treatment was particularly difficult, according to the authors, because of the behavior of the bacteria agglutinated on the vessel walls and in the visceral capillaries and also because of the lack of bacteriologic tests); and (3) those with subacute ulcers (often with negative hemoculture) and evoluting in several months toward cardiac insufficiency. The authors stress that the chief problem is estimation of the daily dose of penicillin to be given intramuscularly; it varies from 500,000 units in the more favorable cases to 50,000,000 units or more in more resistant cases. In cases with positive hemocultures, three criteria are used to decide the dosage: (1) sensitivity of the organisms to penicillin; (2) hemocultures every fifth day during treatment, and (3) abrupt cessation of treatment twenty-five to thirty days after a negative hemoculture has been obtained and careful observation of the patient during the following month. Recovery resulted in 85 per cent of the cases with positive hemocultures and in 47 per cent of cases with negative hemocultures; there were 6 failures in the 6 cases of subacute primary endocarditis. In 8 cases with positive hemocultures G. Marchal obtained 5 apparent recoveries, lasting from four to thirteen months; 2 patients died from cardiac insufficiency and 1 from cerebromeningeal hemorrhage. The author stresses the necessity of improving the technic of hemocultures by modifying the culture mediums and increasing the number of sternal and splenic punctures. He thinks that impure fractions of penicillin may induce a functional myocardial insufficiency. G. Giraud emphasizes also the importance of myeloculture, which was positive in 2 cases with negative hemoculture. A. Camelin, A. Guibert, Noger and Tarel (Lyons) report 14 cases of subacute primary bacterial endocarditis with negative hemocultures and isolated aortic localizations, which were all penicillin-resistant. Sedillian and Monnet, in 25 cases of malignant endocarditis lenta, obtained 12 good results lasting from one to twenty-three months; they met with 10 failures, among which were 9 deaths in the course of treatment and 1 after an immediate good result but followed by an exacerbation. They, too, believe that penicillin is not without a harmful effect on the heart.

Endocarditis Due to Escherichia Coli

At the Claude-Bernard hospital, Morin, Dupont and Cavigneaux treated 2 patients with acute malignant endocarditis due to Escherichia coli, an uncommon affection (of which the world bibliography, studied by the authors, mentions 46 cases in sixty-two years). The first patient was a woman, aged 28, in whom five months after recovery from pyelonephritis due to Esch. coli, violent lumbar pain, hematuria, purulent urine and fever occurred suddenly. Blood culture was positive for Esch. coli. Despite sulfonamide therapy, the septicemia was complicated by icterus, azotemia and purulent meningitis, and there was a systolic murmur at the apex of the heart. Notwithstanding streptomycin therapy in a total dosage of 4,000,000 units given intramuscularly and of 500,000 given intraspinally, death occurred on the fourth day. Necropsy revealed large vegetations, in the form of a cauliflower, on the mitral orifice, and infarcts in the spleen and kidneys. The other patient was a woman, aged 38, in whom severe chills were followed by a temperature of 105.8 F. A definite meningeal reaction was noted, also an anemia with 2,600,000 red cells, azotemia and bronchitis. The patient received for five days a daily dose of 10 grains (0.65 Gm.) of sulfonamide compound, and for four days penicillin was given without any therapeutic effect; twelve days later, hemoculture was for the first time positive as regards Esch. coli. After hospitalization, hemoculture was again positive for the organism and 30 micrograms of streptomycin per cubic centimeter was necessary to inhibit its growth in vitro. After having been given during six days a total of 9 grains (0.58 Gm., 580,000 units) of streptomycin the patient died. At necropsy, on the wall of the right auricle, at a certain distance from the tricuspid orifice, a vegetation 1.5 cm. in diameter was found. The authors noted that the two patients had no rheumatic ancestors, and no prior cardiac condition. It is not possible to draw conclusions regarding the curability of endocarditis due to Esch. coli, as the streptomycin therapy could not be used soon enough; higher doses, given under strict supervision, are to be recommended.

BERLIN

(From Our Regular Correspondent)

March 4, 1948.

Medical Professional Developments in the Soviet Zone

In the Soviet-occupied zone of Germany certain developments in the medical profession reflect clearly the prevailing trend to do away with freedom of the individual for the sake of the totalitarian system. Within this system, the position of the physicians is not different from that of other persons, no better and no worse. One thing is clear: the physician in the Soviet zone of occupation has ceased to exercise freedom in his profession.

Registration Order for Physicians

On Jan. 15, 1947 a decree was issued by the Central Administration of Health in the Soviet zone of Germany, ordering the obligatory registration of all physicians with the stated purpose of organizing their proportionate distribution over the whole zone. The order appeals to voluntary cooperation by physicians in carrying out this plan but leaves no doubt that nonconformists have no other choice and must comply with the issued orders. All physicians within the zone have to register not only with local authorities but with the central agency. This registration is based on a questionnaire requesting a wide range of professional and personal data. The physician has to provide details concerning his training, qualifications, specialties and abilities in related

V 13
1948

fields. He must report within a week each material change in his personal circumstances, such as marriage, birth of a child, change of residence or professional activity, acquisition of a degree and the like. The duties to report such matters are so broadly worded that it is difficult to state their limitations, particularly in view of the fact that, at the request of the Central Health Office, he has to appear at any time before that agency to answer in person any question deemed pertinent about his professional or personal life. The duty to report includes also the disclosure not only of his political past between 1939 and 1945 (as required by Control Council Directives 24 and 38) but of his present political activities. This is motivated by the desire of the central authorities of the Soviet zone to inquire into the extent to which the physician is participating in the political reorientation. Heavy penalties are provided for violation of the duty to provide information asked for by the order.

Medical Profession Part of Trade Union Organization

By circular letter of Nov. 28, 1946 the "Voluntary" organization of all physicians, dentists, apothecaries and veterinarians (irrespective of whether they exercise a free profession or are engaged on an employment basis) was established as *Fachgruppen* (professional groups) of the branch *Gesundheitswesen* within the provincial or territorial organization of the *Freier deutscher Gewerkschaftsbund*, the association of the Communist-influenced German trade unions. A local professional group may be organized in each town where there is a minimum of twenty members of the profession. Former nominal members of the Nazi party may be admitted but may not be office holders. These professional groups elect special committees for professional questions, scientific matters and economic problems, which cooperate with the provincial and central offices in carrying out the policies laid down by the official Health Administration.

OSLO

(From Our Regular Correspondent)

April 17, 1948.

Fair Play in Hospital Appointments

Nobody wants to cheat, but every one appreciates the advantage of a running start. Similarly, the old suspect and the young know that the other side is not endowed with the moral integrity of Caesar's wife. Hence the development in each of the three Scandinavian countries of a group of physicians with the title in Norway of the Association of Younger Doctors. As of January 1948 this group became a branch of the Norwegian Medical Association. In the annual report of this young association an account is given of some of the 346 instances in which it has intervened on behalf of its members. In as many as 243 of these cases the problem was one of salary or remuneration, and in 33 cases it dealt with complaints over hospital appointments. In 39 instances the problem concerned the working conditions, etc., of hospital physicians.

The situation becomes extremely delicate when the head of a public hospital indulges in preferences with regard to junior appointments which require the strictest impartiality. It is the duty of the head of the Norwegian Public Health Service, the health director, to make recommendations, but his is not always the last word. And even when it is, his decisions are sometimes challenged, although in his office a careful account is kept of the career and record of practically every physician in Norway. It is easy enough to allot points for terms of hospital service and the like, but how can one measure in figures such qualities as patriotism or the lack of it? It is easy enough to distinguish between a former quisling and a doctor whose patriotism entailed imprisonment during the German occupation, but in this field there are many other finer distinctions to be made. To many of these problems there is no clearcut solution, but the Association of Younger Doctors is at work to make hospital appointments as fair as possible in this hard and competitive world.

The Scandinavian Medical Press

A few years ago nearly all the really important medical journals in Denmark, Finland, Norway and Sweden joined forces in a conglomerate publication known as *Nordisk Medicin*. This weekly publication contributed much to the prestige of Scandinavian medicine abroad, but at home it did not give full satisfaction. It was objected that by keeping to national watertight compartments the editors had failed to produce a cohesive publication reflecting the universal character of medical science. Might not national grouping of the subject matter give place to a scientific grouping which paid no heed to national boundaries? This question and many others were discussed and a satisfactory compromise was achieved, resulting in the issue of this publication at the beginning of 1948 in a much changed form. *Nordisk Medicin* has now become *Nordisk Medicin*. A staff of specialists has been engaged to contribute unsigned editorials and comments, and the space allotted to each signed article has been strictly rationed. This rationing has been effectively applied also to the transactions of medical societies, and space has been found for short case records, therapeutic hints and a host of minor details likely to interest the general practitioner as well as the research worker. Original articles are grouped so that individual articles on the same subject treated from different points of view. Notes on persons as well as on things are particularly useful to the Scandinavian reader wanting to know who's who in neighboring countries.

The Fate of Objectors to BCG

In the tuberculosis department of Oslo's Municipal Public Health Service the rule has been practiced for several years of offering every tuberculin-negative youngster intracutaneous BCG vaccination when a radiologic examination of the lungs is negative. Those who object to BCG vaccination (and hitherto every one has been free to object, but no longer) serve as controls, both the BCG-vaccinated and the objectors being kept under supervision for years after leaving school. Dr. G. Hertzberg has recently published such a control comparison, his material concerning youngsters who, at the age of 13, accepted or refused BCG vaccination. Among the 127 boys and 106 girls who were vaccinated, there were only 1 boy and 1 girl in whom signs of tuberculosis subsequently developed, whereas among the 66 boys and 75 girls who refused BCG vaccination there were 34 boys and 43 girls who subsequently showed signs of tuberculosis. This investigation covered the period 1941 to 1946 and included all the youngsters belonging to the two categories studies. But the total BCG-vaccinated material of this tuberculosis department now amounts to well over 18,000 persons, whose careers will shortly be the subject of a comprehensive monograph on BCG vaccination.

Correspondence

CONTAMINATED DEXTROSE SOLUTION

To the Editor:—We are reviewing every procedure and record and testing every piece of equipment in the department involved, but at this moment we still do not know the cause of the contamination in some of the bottles of two lots of dextrose solution. The original tests were satisfactory, and retained samples and stocks remaining in our Berkeley warehouse were not contaminated. Some of the bottles returned from the field were unquestionably contaminated, a contamination which was apparent on visual inspection and viable on culture.

This laboratory has over a half century record of safety in the production of bioligicals and other products for parenteral injection. It is a record which neither management nor the men and women of unquestioned capability and integrity who staff the laboratories would wilfully jeopardize. Yet what was to us inconceivable happened. I need not protest of our extreme regret for this most unfortunate occurrence.

ROBERT F. CUTTER, M.D.,
President, Cutter Laboratories,
Berkeley, Calif.

Note.—The unfortunate experience of the Cutter Laboratories indicates the necessity for constant vigilance, particularly as relates to materials to be injected intravenously or otherwise into the human body. Apparently the Cutter Laboratories are doing everything possible to detect the source of contamination and to eliminate any such possibility for the future.—Ed.

THE EPILEPTIC DRIVER

To the Editor:—In the April 17 issue of THE JOURNAL, page 1062, Dr. Wartenberg of San Francisco commended the four states that require physicians to report cases of epilepsy to the state board of health in order that the drivers' licenses may be revoked. He hopes that other states will enact a similar law. I wish to register my vigorous objections to such a law.

It defeats its own purpose in that many epileptic drivers may hesitate to seek the medical advice that might rid them of seizures and make them safe drivers. There is a more important objection. The California law applies to persons who have "lapses of consciousness which may be chronic." Only a minute proportion of persons who answer to this description are epileptic. Probably a hundred times more numerous are those who have recurrent impairment of consciousness because of an excessive use of alcohol. If Boards of Health and Registrars of Motor Vehicles are genuinely interested in putting dangerous drivers off the road, let them require that physicians report their alcoholic patients and persons subject to syncope or heart attacks, as well as those with epilepsy. I understand that some at least of the states commended by Dr. Wartenberg enacted this law without prior consultation with medical authorities. The state of Massachusetts has followed a more sensible course. The Registry of Motor Vehicles has asked physicians belonging to the League Against Epilepsy for advice regarding the licensing of epileptic persons, the possibility of electroencephalographic examinations in doubtful cases and the willingness of these physicians to assist in judging individual cases. Everyone desires greater highway safety. No one condones the licensing of the active epileptic; but to pick this small group out of the large mass of persons whose physical condition makes them a highway hazard and to require that their diagnosis, regardless of all circumstances, be reported to a nonmedical public agency is both unwise and unjust.

WILLIAM G. LENNOX, M.D., Boston.

Council of the World Medical Association visits headquarters of the American Medical Association. Reading from left to right: Dr. George F. Lull, Secretary and General Manager of the American Medical Association; Dr. S.C. Sen, India; Dr. O. Leuch, Switzerland; Dr. L. G. Torsel, Spain; Dr. A. Hartwich, Austria; Dr. El Marquis, France; Dr. D. Knutson, Sweden; Dr. P. Cibrie, France; Dr. Ernest G. Irons, Secretary of Board of Trustees, American Medical Association; Dr. J. A. Pridhon, Great Britain; Dr. J. Stuchlik, Czechoslovakia; Dr. John Yui, China; and Dr. Louis H. Bauer, Secretary General of the World Medical Association.

V 1
194

Bureau of Legal Medicine and Legislation

MEDICOLEGAL ABSTRACTS

Life Insurance: Death of Insured Following Abortion.—The plaintiff, as beneficiary, sued to recover on three life insurance policies issued to the deceased by the defendant insurance company. From a judgment for the plaintiff, the defendant appealed to the court of appeal of Louisiana, Orleans.

Each policy sued on provided in effect that no benefits would be payable if the insured died as the result of a violation of the law. The death of the insured resulted from acute tetanus following a criminal abortion, to which she had voluntarily submitted.

The defendant first contended that the deceased was an accessory to the abortion, which is a crime, and that the aforementioned provisions of the policies therefore absolved it from liability. The definition of the crime of abortion as found in the Louisiana criminal code, the court said, indicates that it was the legislature's intention to make the person who feloniously administers a drug or potion or any other substance to a pregnant woman, or who uses any instrument or any other means whatsoever on a pregnant woman, for the purpose of procuring a premature delivery of the embryo or fetus, guilty of the crime of abortion. The language used in the definition is not broad enough to show an intention to include a woman who consents or submits herself to an abortion, however, even though such woman is guilty of a detestable and revolting offense against the laws of nature. The defendant is absolved from liability in this case only if an unlawful act perpetrated by the insured caused her death. If it was the intendment that the insurer would not be liable if the criminal act causing death was that of a third person, a case might arise in which an innocent policy holder, without provocation, was feloniously killed by another, in which event the insurance company would be relieved of paying the policy, as it could be said that the death arose from a criminal act, even though the insured played no part therein, except being the victim. A provision of a life insurance policy relieving the insurer from liability where death results from a violation of the law is to be given a reasonable and common sense construction. We believe, the court concluded, that the exclusion of liability clause in question was intended to apply only in cases where death resulted from a violation of the law by the insured herself.

The defendant next argued that the act causing the insured's death was of a heinous and abhorrent character and that public policy precluded insuring her against its consequences. The record does not show what relationship, if any, existed between the plaintiff and the deceased, nor is it shown that he had any knowledge of the deceased's intention to submit to the operation or played any part in it. The plaintiff is, however, the designated beneficiary and seeks the recovery individually and for his own account. The question presented, said the court, is therefore: Should the plaintiff here, who is the named beneficiary of life insurance policies, be allowed to enforce collection of the policies where the death of the insured resulted from a criminal operation, the policies not expressly providing against the insurer's liability for death from such a cause?

It seems to be the general rule, the court of appeal said, to take into account two different classes of life insurance policies, one class being those policies made payable to the assured's estate, or to his personal representative by some appropriate designation, and the other class being those policies in which some third person is nominated and designated as beneficiary. The weight of authority appears to be to the effect that a person or his estate should not profit as a result of his own wrongdoing, and that when the maturity of an insurance contract made payable to the estate, or to the personal representative, is hastened or accelerated by his wrongdoing, even in the absence of any prohibitory clause in the contract, no recovery can be had on the policy. It is otherwise in cases involving policies in the latter class, i.e., those running in favor of third persons as beneficiaries, on the theory that the beneficiaries, having acquired a vested interest in the policies, cannot be either divested thereof or jeopardized therein, after issuance of the policies, by any wrongful act of the insured not excluded from coverage, for which they are not responsible. Even though the deceased came to her death as a result of the illegal operation for abortion to which she had voluntarily subjected herself, such submission on her part, which was reprehensible and detestable, cannot be used by the insurer as a valid defense to absolve itself from the payment of the proceeds of the policies to plaintiff, as plaintiff appears individually and as the designated beneficiary, having a vested interest in the policies. His rights as beneficiary could not be affected, and were not affected, in any way by the act of the insured, for which he was in no way responsible; there is no reason for disregarding the terms of the contract of insurance and exonerating the insurer on the grounds of public policy. Accordingly the judgment of the trial court in favor of the plaintiff was affirmed.—*Payne v. Louisiana Industrial Life Ins. Co.*, 33 So. (2d) 444 (La., 1948).

Medical Motion Pictures

FILM REVIEWS

Human Reproduction 825 feet (one reel), showing time twenty-three minutes.

The anatomy, physiology and general functioning of the human reproductive system is well shown in this film. Outstandingly successful is the explanation of ovulation and menstruation. The subject is explained with fine scientific accuracy and complete objectivity so that there should be no embarrassment in either sex, though it would appear wise to show this film to college men and women in segregated groups. The essential facts that college men and women should know about the structure and function of the reproductive system are shown in such a way as to be easily understood. This film should be useful in the instruction of college groups, selected high school groups, nurses and teachers. A silent follow-up film strip, consisting of scenes selected from the corresponding motion picture over which questions are superimposed, accompanies each motion picture. Photography is excellent and the animation is well done.

Current Medical Literature

AMERICAN

The Association library lends periodicals to members of the Association and to individual subscribers in continental United States and Canada for a period of three days. Three journals may be borrowed at a time. Periodicals are available from 1937 to date. Requests for issues of earlier date cannot be filled. Requests should be accompanied with stamps to cover postage (6 cents if one and 18 cents if three periodicals are requested). Periodicals published by the American Medical Association are not available for lending but can be supplied on purchase order. Reprints as a rule are the property of authors and can be obtained for permanent possession only from them.

Titles marked with an asterisk (*) are abstracted below.

American Journal of Medical Science, Philadelphia

215:1-122 (Jan.) 1948

Carcinoma of Lung. Adrian Lambert. -p. 1.
Statistical Study of 112 Cases of Benign Gastric Ulceration. M. Feldman. -p. 13.
*Experimental Study on Localization of Castle's Intrinsic Factor in Human Stomach. Anti Anemic Effect of Powdered Human Fundus and Pylorus. E. Landboe Christensen and C.M. Plum. -p. 17.
Rectal Polyps: Diagnosis, Five Year Follow Up, and Relation to Carcinoma of Rectum. J.R. Colvert and C.H. Brown. -p. 24.
Attempts to Inhibit Rh Antibody Production in Rabbits. Use of Ethylene Disulphonate, Sodium Salicylate, Pyribenzamine and A and B Specific Blood Substances. W.F. Scherer. -p. 33.
Variation in Prothrombin Test Technic. B. Fisher. -p. 39.
*Study of Mechanism and Treatment of Experimental Heat Pyrexia. W.M. Daily and T.R. Harrison. -p. 42.
Studies on Action of Intravenously Administered Sodium Amytal. S. Wolf and H.S. Ripley. -p. 56.
*Thiouracil and Propylthiouracil in Pre-Surgical and Medical Management of Thyrotoxicosis. R.C. Grauer, H. De Walt and C.W.W. Elkin. -p. 63.
Studies of Biotin Metabolism in Man: IV. Studies of Mechanism of Absorption of Biotin and Effect of Biotin Administration on Few Cases of Seborrhea and Other Conditions. T.D. Oppel. -p. 76.
Penicillin Therapy in Subacute Bacterial Endocarditis. H.M. Wagner. -p. 84.
Non-Atheromatous Lesions of Coronary Arteries. M. Plotz. -p. 91.
Iatrogenic Factors in Illness. F.R. Drake. -p. 103.

Castle's Intrinsic Factor in Human Stomach.—Landboe-Christensen and Plum made dried powdered preparations from the fundal and from the pyloric parts of the wall of the human stomach. Feeding of 100 Gm. of dried powdered and defatted stomach wall from the anatomic fundal part of the human stomach to a patient with pernicious anemia produced a striking therapeutic effect. This demonstration of high antipernicious anemia activity of human fundus powder agrees with the observations of Fox and Castle and corresponds with the localization of the pathologic changes in the stomach of patients with pernicious anemia. The effectiveness of human fundus powder is in contrast, however, to the total ineffectiveness of hog fundus. The feeding of 80 Gm. of powdered stomach wall from the pyloric part of the human stomach to a second patient with pernicious anemia produced a moderate therapeutic effect. The effect was less than in the case treated with fundus powder. The authors conclude that antipernicious anemia activity occurs not only in human fundal glands, but also in human pyloric glands.

Experimental Heat Pyrexia.—Daily and Harrison use the term heat pyrexia synonymously with heatstroke. They produced heat pyrexia in dogs, rats and mice by exposure to high environmental temperatures. Except for differences related to the sweating mechanism, and the more rapid course of events in smaller animals, the clinical picture of heat pyrexia in animals resembles closely that seen in man. On the basis of the studies in animals, the author suggests a treatment for human subjects with heat pyrexia. If the patient is comatose, or if body temperature is above 41 C. (106 F.), he should be immersed in ice water. Milder instances may be treated by evaporative cooling. The oral temperatures should be followed minute by minute during the process of cooling. At an oral temperature of about 38.5 C. (101 F.) the patient should be moved to a tub of water at about 38 C. After the body temperature has stabilized at a normal level, hydrotherapy may be discontinued. If manifestations of shock—gray skin, slow filling of blanched areas, poor filling of veins behind a tourniquet and severe hypotension—are present, infusions must be given with great caution, the venous pressure, state of breathing and breath sounds being continously observed. Rapid digitalization is probably indicated if pulmonary edema or rising venous pressure develop. Oxygen therapy may be valuable when either peripheral failure or pulmonary edema is present. The patient's temperature must still be watched after the emergency state has passed. Attention should be given to fluid and electrolyte requirements.

Thiouracil and Propylthiouracil in Management of Thyrotoxicosis.—Grauer and his associates report the clinical effects and the laboratory response to thiouracil and propylthiouracil observed in 100 thyrotoxic patients treated over a period of almost three years. The galactose thyroid function test was helpful as a therapeutic guide and as a diagnostic supplement to the basal metabolic rate in 70 per cent of the patients. The proplylactic use of "solubilized" liver as a source of folic acid failed to prevent the occurrence of 1 case of agranulocytosis, 1 case of granulocytopenia and 2 cases of leukopenia in thiouracil-treated patients. Neither the use of pyridoxine intravenously nor large doses of folic acid stimulated granulocytosis. Propylthiouracil is less toxic and more potent than thiouracil and apparently can be used with relative impunity in thiouracil-treated patients. Ten of the 15 thyrotoxic patients treated medically with thiouracil showed a remission of from seven to twenty-three months. The presurgical preparation of thyrotoxic patients with the antithyroid drugs lessens the mortality rate and decreases the period of hospitalization.

American Journal of Pathology, Ann Arbor, Mich.

24:1-234 (Jan.) 1948

Clinical and Pathologic Effects of Nitrogen and Sulfur Mustards in Laboratory Animals. I. Greef, D. A. Karnofsky, V. B. Jager and others. —p. 1.
*Aspects of Evolution of Silicotic Lesions. I. Costero. —p. 49.
True Aneurysms of Mitral Valve in Subacute Bacterial Endocarditis. O. Saphir and E. P. Leroy. —p. 83.
Virus Myocarditis: Pathologic and Experimental Studies. E. C. H. Schmidt. —p. 97.
Histologic Changes in Rickettsialpox. Vera B. Dolgopol. —p. 119.
Studies on Amoboid Motion and Secretion of Motor End-Plates. X. Effects of Slow Nervous Action of Disease on Structure of Nerve Endings, Neurosomes and Muscle Fibers. E. J. Carey, E. Haushalter, L. C. Massopust and others. —p. 135.
Vascular Proliferations, with Features of Arteriovenous Anastomoses, in Sympathetic Chain of Hypertensive Patients. H. Lattes. —p. 177.
Lesions in Elastic Arteries Associated with Hypertension. C. T. Ashworth and D. M. Haynes. —p. 195.
Alterations of Cerebral Capillaries in Early Stage of Arterial Hypertension. I. M. Scheinber. —p. 211.

Coccidioidomycosis in Animals with Report of New Case in Dog. H. Smith.—p. 223.

Evolution of Silicotic Lesions.—Costero says that earlier descriptions of the microscopic appearance of silicotic lesions are based on the classic staining technics with aniline dyes. He studied 35 cases of pulmonary silicosis with the silver impregnation technics of Rio-Hortega and has described a number of little known structural details, which may contribute to a better understanding of the evolution of the silicotic nodule and which explain presence of those other nonnodular lesions that are constantly observed in the lungs of patients with silicosis. The histologic basis of all lesions induced in the human lung by siliceous dust is proliferation of reticular fibers. These fibers are partially or wholly transformed into collagen and undergo hyalinization and retraction. The silicotic node continues its growth as long as there are reticular fibers; growth is arrested when collagenization is complete. In addition to the typical silicotic nodule there also appear diffuse sclerotic plaques, peribronchial sclerosis and proliferative pleuritis. These three lesions have special characteristics which can be related to the different types of lymphatic drainage in each region; however, their histogenesis, structure and evolution are similar to those of the typical silicotic nodule.

American Review of Tuberculosis, New York

57: 1-114 (Jan.) 1948

Chronic Tuberculous Mediastinitis and Mediastinal Lymphadenitis: Report of 2 Cases Illustrating Certain Complications with Surgical Measures for Their Relief. A.H. Aufses and H. Neuhof.—p. 1.

American Association for Thoracic Surgery: Report of Its Meeting on May 28, 29 and 30, 1947. H.H. Meade Jr.—p. 18.

Chemotherapy of Pulmonary Tuberculosis. J.A. Kolmer. p. 25.

Antibiotic and Chemotherapy of Tuberculosis. H. McLeod Riggins and R.P. Gearhart.—p. 35.

Streptomycin Resistant Tubercle Bacilli. Their Development During Streptomycin Therapy of Pulmonary Tuberculosis. M.H. Flsher.—p. 53.

Sensitivity of Tubercle Bacilli to Streptomycin: In Vitro Study of Some Factors Affecting Results in Various Test Media. M.H. Flsher. p. 58.

Cincinnati Journal of Medicine

28:791-872 (Dec.) 1947

Report of Epidemic of Atypical Pneumonia in Children with Observations on Cold Agglutination Titers. Rose G. Ames.—p. 791.

Psychiatry for the Millions. C. Binger.—p. 802.

Delaware State Medical Journal, Wilmington

19:229-262 (Dec.) 1947

Ureteral Calculi with Symptomatology Referable to Other Organs. E. L. Stonbaugh.—p. 229.

20:1-20 (Jan.) 1948

Gastric Neurilemmoma: Report of 4 Cases. H. S. Byers and J. W. Howard.—p. 1.

Perineal and Vaginal Total Cystectomy. B. S. Vallett.—p. 6.

Kernicterus: Review of Literature, with Report of 2 Cases. G. N. Eriksen Jr.—p. 7.

Rat-Bite Fever Due to Streptobacillus Moniliformis. C. R. Donoho, E. G. Scott and J. F. Flanders.—p. 11.

Endrocrinology, Springfield, Ill.

41:437-526 (Dec.) 1947. Partial Index

Pituitary and Carbohydrate Metabolism of Brain. M. Reiss and D. S. Rees.—p. 437.

Tissue Changes and Sodium Balance in Pantothenic Acid-Deficient Rats. A. J. McQueeney, L. L. Ashburn, F. S. Daft and R. Faulkner.—p. 441.

Studies on Bioassay of Hormones. R. I. Dorfman.—p. 451.

Metabolism of Steroid Hormones: Studies on 17-Ketosteroids and Androgens. R. I. Dorfman, B. N. Horwitt, R. A. Shipley and others.—p. 470.

*Effects of Vitamin A Deficiency on Thyroid Function Studied with Radioactive Iodine. M. B. Lipsett and R. J. Winzler.—p. 494.

Ovarian Influence on Response of Anterior Pituitary to Estrogens. J. T. Bradbury.—p. 501.

42:1-76 (Jan.) 1948. Partial Index

Studies on Bioassay of Hormones. R. I. Dorfman.—p. 1.

Metabolism of Some Chemical Degradation Products of Estrogens: Westerfeld's Lactone, Bis-Dehydro-Doisynolic Acid, Estrololactone and Meta-Estradiol. A. Segaloff.—p. 15.

Viscosimetric Determination of Hyaluronidase Content of Spermatozoa. D. A. Sherber, C. H. Birnberg and B. Kurzrok.—p. 20.

Variables Affecting Assay of Insulin. L. I. Pugsley and Sybil Rampton.—p. 31.

Chemical Histology and Cytology of Pineal Body and Neurohypophysis. G. B. Wislocki and E. W. Dempsey.—p. 56.

Vitamin A Deficiency and Thyroid Function.—The lack of agreement concerning the effects of vitamin A deficiency on thyroid function induced Lipsett and Winzler to investigate this problem with the use of radioactive iodine (I^{131}) as a tracer. They found that despite the increase in size of the thyroid glands of the vitmin A-deficient rats the total uptake of radioactive iodine was the same as in the control animals. In vitamin A deficiency the percentage of inorganic I^{131} in the thyroid gland reached higher than normal values and decreased more slowly than in the controls. Vitamin A deficiency decreased the rate of formation of thyroxine. These results indicate that iodine metabolism is abnormal in the vitamin A-deficient rat.

Illinois Medical Journal, Chicago

93:1-64 (Jan.) 1948

Pulmonary Complications Due to Endobronchial Foreign Bodies. P. H. Holinger, A. H. Andrews Jr. and G. C. Anison.—p. 19.

Meningococcic Infections. W. M. Whitaker.—p. 24.

Present Status of Penicillin in Dermatology—A Resume. N. C. Baressner.—p. 31.

Continuity Metastases. F. Haubrecht and E. A. Crowell.—p. 38.

More Common Causes of Failure in Treatment of Varicose Veins. J. R. Herriman and B. Fitzgerald.—p. 41.

Journal of Clinical Investigation, Boston

27: 1-164 (Jan.) 1948

Renal Plasma Flow and Sodium Reabsorption and Excretion in Congestive Heart Failure. R. Maketoff, G. Rose and L. Leiter.—p. 1.

Effect of Exercise on Cardiac Output and Pulmonary Arterial Pressure in Normal Persons and in Patients with Cardiovascular Disease and Pulmonary Emphysema. J. B. Hickam and W. H. Cargill.—p. 10.

Study of Human Myogram. Study of Normals, and of Patients with Addison's Disease, Thyrotoxicosis and Progressive Muscular Atrophy. R. L. Swank and Grace E. Berguer.—p. 24.

Effect of Tetraethylammonium on Small Bowel of Man. W. P. Chapman, J. B. Stanbury and C. M. Jones.—p. 34.

*Prothrombin Response to Parenteral Administration of Large Doses of Vitamin K in Subjects with Normal Liver Function and in Cases of Liver Disease: Standardized Test of Estimation of Hepatic Function. P. N. Unger and S. Shapiro.—p. 39.

Renal Regulation of Acid-Base Balance in Man. R. F. Pitts, W. D. Lotspeich, W. A. Schiess and J. L. Ayer.—p. 48.

Exchanges of Sodium and Potassium in Familial

Periodic Paralysis: T. S. Danowski, J. R. Elkinton, B. A. Burrows and A. W. Winkler. —p. 65.

Transfers of Cell Sodium and Potassium in Experimental and Clinical Conditions. J. R. Elkinton, A. W. Winkler and T. S. Danowski. —p. 74.

Studies in Serum Electrolytes. XV. Calcium-Binding Property of Serum Proteins (Multiple Myeloma, Lymphogranuloma Venereum and Sarcoidosis). A. J. Rawson and F. W. Sunderman. —p. 82.

Serum Precipitable Iodine Concentrations During Pregnancy. H. Heinemann, C. E. Johnson and Evelyn B. Man. —p. 91.

Studies of Hemophilia. II. Assay of Antihemophilic Clot-Promoting Principle in Normal Human Plasma with some Observations on Relative Potency of Certain Plasma Fractions. B. Alexander and Greta Landwehr. —p. 98.

*Liver Involvement in Infectious Mononucleosis. A. S. Evans. —p. 106.

Study of Disappearance of Congo Red from Blood of Non-Amyloid Subjects and Patients with Amyloidosis. P. N. Unger, M. Zuckerbrod, G. J. Bach and J. M. Steele. —p. 111.

Chemical, Clinical and Immunologic Studies on Products of Human Plasma, Fractionation: XXXIV. Comparative Studies on Nutritive Value of Orally and Intravenously Administered Human Serum Albumin in Man. R. D. Eckhardt, Jessica H. Lewis, T. L. Murphy and others. —p. 119.

Effects of Intravenous Injection of Concentrated Human Serum Albumin on Blood Plasma Ascites and Renal Functions in 3 Patients with Cirrhosis of Liver. A. J. Patek Jr., H. Hankin, H. Colcher and others. —p. 135.

Osmotic Factors Influencing Formation of Ascites in Patients with Cirrhosis of Liver. H. Hankin and Alice Lovell. —p. 145.

Variations in Blood Pressure Response to Repeated Administration of Tetraethyl Ammonium Chloride. J. E. Lovinson, M. F. Reiser and E. B. Ferris Jr. —p. 154.

Nature of Cold Pressor Test and Its Significance in Relation to Neurogenic and Humoral Mechanisms in Hypertension. M. F. Reiser and E. B. Ferris Jr. —p. 156.

Vitamin K Tolerance Test and Hepatic Function.—This study by Unger and Shapiro is an extension of the study of Shapiro and Richards embodying the principle of imposing a load on the liver by the parenteral administration of large doses of vitamin K. This same principle is utilized in other liver function tests such as sulfobromophthalein sodium retention, bilirubin clearance, dextrose tolerance and galactose tolerance tests. Reaction to injection of vitamin K is correlated in patients with hepatic disease and in normal controls with the results of other liver function tests and liver biopsy or postmortem observations. A standardized vitamin K tolerance test estimating the prothrombin response to parenteral administration of large test doses of vitamin K has been used. One hundred and thirteen tests were made on 110 persons. Of these, 47 were interpreted as negative, 9 doubtful and 57 positive. The authors found the test to be a sensitive indication of hepatic function. It is of considerable sensitivity in measuring hepatic function of prothrombin formation and serves as a good index of the presence or absence of hepatic disease. Excellent correlation with clinical observations indicative of impaired hepatic function were obtained.

Involvement of Liver in Mononucleosis.—Evans compared results of the cephalin-cholesterol flocculation test in the serum of patients with infectious mononucleosis without jaundice and with results of other liver function tests. Serial determinations were made in 19 consecutive cases of infectious mononucleosis without jaundice. Results indicate that demonstrable hepatic impairment occurs in many such cases. The cephalin cholesterol flocculation test may be a more sensitive indicator of this disturbance than the thymol turbidity test. Use of the cephalin cholesterol flocculation and the thymol turbidity tests may be helpful in distinguishing infectious mononucleosis from uncomplicated upper respiratory infections. The author directs attention to the hepatic involvement in infectious mononucleosis and infectious hepatitis.

Journal of Experimental Medicine, New York

87:87-174 (Feb.) 1948

Lethal Effect of Relative Humidity on Air-Borne Bacteria. E. W. Dunklin and T. T. Puck. —p. 87.

Nutrition of Host and Natural Resistance to Infection. III. Conditions Necessary for Maximal Effect of Diet. H. A. Schneider. —p. 103.

Experiments on Role of Chicken Mite, Dermanyssus Gallinae, and Mosquito in Epidemiology of St. Louis Encephalitis. Margaret G. Smith, R. J. Blattner, Florence M. Heys and A. Miller. —p. 119.

Carcinogenicity of Certain Derivatives of p-Dimethylaminoazobenzene in Rat. J. A. Miller and E. C. Miller. —p. 139.

Influence of Available Fluid on Production of Experimental Hemoglobinuric Nephrosis in Rabbits. J. J. Lalich. —p. 157.

Renal Athrocytosis and Intracellular Digestion of Intraperitoneally Injected Hemoglobin in Rats. L. J. Rather. —p. 163.

J. of Investigative Dermatology, Baltimore

9:277—338 (Dec.) 1947

Fungistatic Properties of Salicil and Related Compounds. H. Heinemann. -p. 277.

Skin Sensitization to BAL. T. Cornbleet. -p. 281.

Absence of Effect of 2,4-Dichlorophenoxyacetic Acid (2,4-D) on Certain Fungi in Culture. H. Beerman. -p. 283.

Arterioles of Skin in Essential Hypertension. E. M. Farber, E. A. Hines Jr., H. Montgomery and W. Hall Craig. -p. 285.

Acanthosis Nigricans: Analysis of Data in 22 Cases and Study of Its Frequency in Necropsy Material. H. R. Kierland. -p. 299.

Sunburn-Protecting Effect of Para-Aminobenzoic Acid. S. Rothman and A. B. Hennington. -p. 307.

Multiple Budding in Sporotrichum Schenckii Matruchot, S. D. Salvin. -p. 315.

Eczema Vaccination: Report of 2 Cases with Review of Literature. Kathleen A. Riley and J. L. Calloway. -p. 321.

Allergen of Human Dander Present in Skin of General Body Surface. F. A. Simon. -p. 329.

Journal of Nat. Cancer Inst., Washington, D. C.

8:45-90 (Oct.) 1947

Inhibition of Cathepsins of Normal Calf Spleen and Thymus. Mary D. Mayer and Antoinette Greco. -p. 45.

Subcutaneous Sarcomas in Mice Implanted with Hydrocarbocholesterol Pellets. M. B. Shimkin and Rose S. Wyman. -p. 49.

Vascular Reactions of Normal and Malignant Tissues in Vivo: II. Vascular Reaction of Normal and Neoplastic Tissues of Mice to Bacterial Polysaccharide from Serratia Marcescens (Bacillus Prodigiosus) Culture Filtrates. G. H. Algire, Frances M. Legallais and Helen D. Park. -p. 53.

Pulmonary Tumor Induction by Transplacental Exposure to Urethane. C. D. Larsen. -p. 63.

Enzymatic Hydrolysis of Homologous Amino Acid Amides in Normal and Neoplastic Tissues. M. Errera and J. P. Greenstein. -p. 71.

Note on Benzoylarginineamidase Activity in Extracts of Rat Liver and Hepatoma. J. P. Greenstein and Florence M. Leuthardt. -p. 77.

Effects of Methylcholanthrene in Pregnant Mice. L. C. Strong and W. F. Hollander. -p. 79.

Procedure for Fixation, Staining and Mounting of Whole Mounts from Tissue Cultures Grown in Carrel D 3.5 Flasks. W. R. Earle. -p. 83.

V 1
194

Maine Medical Association Journal, Portland

38:283-312 (Dec.) 1947

Surgical Diseases of Gall Bladder and Diagnosis. W. A. Clapp.—p. 283.
American Medicine in Transition. E. F. Stegen.—p. 288.

39:1-24 (Jan.) 1948

Allergy and Skin Disease. M. A. Vickers.—p. 1.
Some Aspects of Pediatric Allergy. E. S. O'Keefe,—p. 3.

Military Surgeon, Washington, D. C.

102:3-84 (Jan.) 1948. Partial Index

Some Influences of Military Medicine upon War. C. A. Swanson. —p. 12.
*Current Problems in Aviation Medicine. H. C. Grow. —p. 14.
Introduction to Military Medicine. E. E. Hume. —p. 17.
Physical Medicine in Marine Hospital. R. L. Waugh. —p. 24.
Aviation Medicine in Industrial Medicine. L. D. Carson. —p. 27.
Medical Service in Reinforcement Installations in E. T. O. A. Laird. —p. 29.
Newer Aspect of Aviation Neuropsychiatry. M. N. Walsh. —p. 33.
Healed Dissecting Aneurysm of Aorta with Signs of Aortic Insufficiency: Case Report. C. G. Spickmall and C. H. Binford. —p. 47.
Penicillin and Streptomycin Precursors. (Their Probable Source and Derivation). R. de Rohan Barondes. —p. 50.
Treatment of Decubitus Ulcers with Fibrin Foam; Preliminary Report. I. S. Cooper and T. I. Hoen. —p. 55.
Benzedrine Psychosis: Report of Case. J. N. Schnoch. —p. 60.

Current Problems in Aviation Medicine.—Grow states that new methods of propulsion, jet and rocket engines, which make possible flight at hitherto unattainable altitudes and at supersonic speeds, have brought with them the problem of supplemental oxygen. Above 42,000 feet (128 kilometers) 100 per cent oxygen must be supplied under pressure. This so-called "pressure breathing" is necessary for unpressurized cockpits and cabins. An alternative is to seal the cabin or the cockpit and introduce a maximum of oxygen and nitrogen under pressure to supply the pilot with an atmosphere equivalent to a lower altitude. Cabin pressurization is now included in Air Force specifications. Extreme cold at high altitudes requires some form of cabin heating, but the temperature control is further complicated by the fact that at supersonic speeds the friction of air on the surface of the aircraft increases the temperature inside the aircraft, so that it may be necessary to refrigerate rather than heat the cabin. Another great problem is acceleration experienced in rapid takeoff of high speed aircraft. Research is required to solve these many problems.

Nebraska State Medical Journal, Lincoln

33:1-36 (Jan.) 1948

Management of Difficult Labor. T. K. Brown.—p. 3.
*Cancer Potential in Involuting Organs. R. J. Crossen. —p. 8.
Treatment of Certain Serious Infections in Newly-Born Infant. P. J. White.—p. 13.
Management of Colles' Fracture and Its Complications. W. V. Bartels.—p. 18.

Cancer Potential in Involuting Organs.—Crossen discusses potential danger of development of cancer in the involuting uterus and ovaries and indicates that primary ovarian carcinoma is the most insidious of the pelvic cancers and the one most frequently overlooked until it has reached a hopeless stage. To reduce deaths from carcinoma of the ovary the author recommends removal of the involuting ovaries whenever the abdomen is opened in the age period of involution (42 or later). Radical surgical procedures instead of conservative measures in noncancerous conditions, which occur in the age of involution, such as uterine myoma, pelvic endometriosis, nonmalignant ovarian enlargements and the chronic inflammatory lesions of uterus and adnexa, are recommended. With regard to prevention of cancer in the endometrium, the author states that circumstantial evidence points to the prolonged action of endogenous estrogen after the menopause as an important factor. He believes that it is better to stop estrogenic activity at approximately age 50, or sooner, if the periods are abnormal, rather than run the risk of continued endometrial stimulation at a time in life when the endometrium should be atrophic. This can be done by radium therapy, and early carcinoma can be ruled out by curettage. Warning is given with regard to the use of estrogenic hormones in the menopause and in cases of hyperplasia. Large doses of estrogenic substances during menopause are considered unwise. Troublesome symptoms can be controlled by small doses of thyroid plus phenobarbital.

Occupational Medicine, Chicago

4:253-358 (Sept.) 1947

*Industrial Medicine in Sweden and in United States. Comparative Practices. S. Forssman.—p. 253.
Medical Testimony in Ontario. D. J. Galbraith.—p. 262.
Obtaining Qualified Medical Testimony. G. N. Edson.—p. 267.
Contribution of Industrial Medical Records. A. G. Kemser.—p. 271.
Need in Workmen's Compensation for Scientific Proof in Medicolegal Controversies. T. C. Waters.—p. 274.
Committee on Medical Testimony, Minnesota Plan. W. G. Workman.—p. 280.
Role of Research in Physical Medicine. D. Y. Solandt. —p. 288.
General Practitioner as Adjunct to Industrial Surgeon. F. E. Poole.—p. 293.
Hazard of Phenylmercuric Salts. L. H. Cotter.—p. 305.
Proper Shoes and Shoeing. F. R. Ober.—p. 310.
Anatomy of Foot and Examination for Its Disorders. R. J. Joplin.—p. 314.

Southern Surgeon, Atlanta, Ga.

16:1-60 (Jan.) 1948

Popliteal Varices Simulating Baker's Cyst. M. Moore Jr.—p. 1.
Common Duct Obstruction Relieved by Injection of Topical Anesthetic into T Tube. W. R. Glenn and W. H. Hill.—p. 3.
Problem of Carcinoma of Colon in Southeast. J. L. Martin.—p. 7.
*Congenital Extrinsic Duodenal Obstruction in New Born: Report of 2 Cases. J. S. Stewart.—p. 15.

Duodenal Obstruction in the Newborn.—Stewart directs attention to the high mortality in congenital duodenal obstruction of the newborn and shows that it is always associated with abnormalities of position and fixation of the intestines. He reviews the embryologic stages of rotation of the intestines and in particular of the midgut, in an attempt more clearly to understand the anatomic arrangement of the intestines which is found when there has been interference with normal rotation. He demonstrates the importance of delivering the intestines onto the abdomen as a technical step in the surgical management of this type of obstruction. Vomiting is the chief complaint in intestinal obstruction of the newborn. Abdominal distention is not a symptom; the only distention that is usually seen is that of the stomach itself, and then only when it has not emptied itself by vomiting. The absence of abdominal distention is probably the chief reason for delay in diagnosis, the physician being loath to make a diagnosis of intestinal obstruction in the absence of something that he can see or feel. The differential diagnosis between hypertrophic pyloric stenosis and extrinsic duodenal obstruction is that the former seldom occurs before the second week of life and bile does not appear in the vomitus, whereas in the latter vomiting begins early, even on the first day, and the vomitus usually contains bile. The authors describe 2 hitherto unpublished cases of extrinsic duodenal obstruction in the newborn.

Book Notices

A Practical Textbook of Leprosy. By R. G. Cochrane, M.D., Ch.B., F.R.C.P., Principal, Missionary Medical College, Vellore, S. India. With a foreword by George R. McRoberts, C.I.E., M.D., F.R.C.P. Oxford Medical Publications. Fabrikoid. Price, $11.50. Pp. 323, with 180 illustrations. Oxford University Press, 114 Fifth Ave., New York 11; Amen House, Warwick Square, London, E. C. 4, 1947.

Dr. Cochrane has been an outstanding student of leprosy for many years, having had large experience with clinical, administrative and research phases of this disease. Scarcely any one has had better opportunity to become familiar with all aspects of the infection. This large experience has nearly all been in British India, and throughout the book this limitation is reflected.

Of the twenty-two chapters, six are devoted to treatment, two to prevention, and the remaining fourteen cover the other fields of interest. It may be said that this is a very useful volume; indeed it would be indispensable for those required to deal with the problem on any considerable scale and of great value to the physician called on but seldom to be responsible for the care of cases. From the point of view of public health it may be said the author is progressive and sound. He advocates dealing with cases on a rational basis, considering the clinical type and the danger of infection from the individual case and the environment in which the patient is to live. While he believes in the great danger of infection in childhood, he recognizes that the danger may exist into the period of youth. He believes that the key to successful preventive measures is to be found in avoiding exposures of children. The author objects to use of the word "leper" and hopes that the book will aid in dispelling the widespread repugnance to the disease which even some physicians entertain. The chapter on pathology deals largely with early lesions and the subject as related to clinical changes and immunologic phenomena. The author does not accept the view that there is a recognizable primary or initial lesion.

Leprolin, or lepromin, about which so much is being written, Cochrane regards as not of importance in diagnosis. However, he considers a positive reaction as an evidence of successful tissue defense, therefore of prognostic importance. There is a useful and detailed account of the technic of taking specimens from cutaneous lesions for microscopic examination, but the illustration shows a skin incision of much greater extent than that required to obtain necessary material. There is a needed caution about regarding the nose as a place for securing specimens for early diagnosis and a warning respecting nonpathogenic acid-fast bacilli likely to be found in the nose. There is a timely warning in regard to "enlarged" nerves and a caution that when in doubt it is better not to regard the nerve as enlarged. The author discourages the use of the expression "incubation period," preferring to use "latency."

In these days when so much thought is being given to psychosomatic medicine one should not be greatly surprised to find the author laying stress on the importance of Christian faith on the part of the doctor as well as on the part of the patient, but this attitude does not blind him to the need for rational therapy. Dr. Cochrane recognizes the tendency of the disease to undergo spontaneous arrest or cure, but he also believes in the use of therapeutic agents. He considers chaulmoogra oil the most useful. Although in the text the author speaks of chaulmoogra oil as the sheet anchor in therapy, in the foreword Dr. George R. McRoberts, professor of medicine at Madras, states that "too much success has been claimed for chaulmoogra oil and its derivatives, and irresponsible optimism with regard to their value has deflected attention from the acute need for more active search for effective chemotherapeutic weapons." The author is well acquainted with the newer drugs in use; however, he states that not enough experience has been had with "promin" and "diasone" for a final appraisal of these drugs. The surgical management of complications is fully discussed. He thinks that patients should be treated in general hospitals when circumstances do not demand or warrant special institutional care. Considerable space is given to reactions that occur during the course of the disease. There is some evidence of careless proofreading—thus we find Langham's where Langhans' is intended. In a legend under an illustration, a lesion is designated as on the left back whereas it is on the right; specific names are not italicized and sometimes not capitalized. On page 41 it is stated that lepromin cannot be standardized, while on page 42 it is said to be difficult to standardize. There are a few other points to which exception may be taken. The date of the "black death" is given as 1340. The one usually accepted is 1348. Some therapeutic agents are referred to by trade names.

A Neuro-Vascular Syndrome Related to Vitamin Deficiency. Door Hendrik Smitskamp. Academisch proefschrift ter verkrijging van de graad van Doctor in de geneeskunde aan de Universiteit van Amsterdam. Paper. Pp. 114, with illustrations. Scheltema & Holkema's Boekhandel en Uitgeversmaatschappij N.V., Rokin 74-76, Amsterdam, 1947.

From his experience in the careful study of 347 cases of burning and painful sensations in the extremities, loss of vision and signs of disturbance of the vestibular apparatus occurring in European prisoners of war interned by the Japanese in Java, the author believes that he has uncovered a new syndrome mainly due to a deficiency of the vitamin B components. It is to be distinguished from the three main groups of vitamin B deficiencies; beriberi, pellagra and hyporiboflavinosis. It is thought most probably to be due to a deficiency of pantothenic acid, in combination with an unusual composition of the diet. Ocular changes occurred in 42.8 per cent of the patients and consisted of the development of scotomas, blurring of vision and occasionally an irreversible optic atrophy. The otoneurologic aberrations occurred in 27.8 per cent of the patients and were characterized by complaints of vertigo, loss of hearing and hyperexcitability of the vestibular apparatus. This symptomatology is supposed by the author to be caused by a dysfunction of the autonomic nervous system. The lesions are probably located in the sympathetic ganglions and perhaps in higher centers of the cord and brain. The arguments in favor of naming this a syndrome are cogent and helpful in straightening out the confusion that exists regarding beriberi and the allied conditions. Those interested in nutrition, ophthalmology and otology will find much of value in this well written monograph.

Hematomas subdurales: Generalidades, sintomatología, bibliografía. Por el Dr. Alfonso Asenjo. Second edition. Paper. Price, 300 pesos. Pp. 251, with 49 illustrations. Stanley, Manuel Rodriguez N. 852, Santiago, Chile, 1947.

In this small book fifty of the two hundred and fifty pages are occupied by a lengthy bibliography. The remainder contains extensive extracts from the literature, numerous case histories and statistics concerning the 67 cases in the author's personal experience. From this material the author finds that about 1.5 per cent of traumatisms of the head are complicated by a hematoma. Ipsilateral symptoms were observed in 12 instances, confusion or obnubilation in 40, papillary edema in 16, motor pareses in 45 and epileptic attacks in 20. There was usually a slight increase in pressure of the spinal fluid, xanthochromia and slight pleocytosis. The electroencephalographic findings were not helpful. Arteriography was not used. Radiography was found useful. One might find signs of intracranial hypertension in children, displacement of the pineal body, old fractures or, infrequently, unusual calcifications. Ventriculography demonstrated displacement, distortion of the ventricles or partial lack of filling of ventricles or subarachnoid space. In general the observations in this report vary only in minor statistical details from generally accepted opinions.

Mainspring: The Grassroots Story of Human Progress. What It Means to You and Me and How Not to Prevent It. By Henry Grady Weaver. Paper. Price, $1. Pp. 236, with illustrations by Robert P. Irwin. Talbot Books, 6432 Cass Ave., Detroit 2, 1947.

This paper bound pamphlet is a polemic. Mr. Weaver, who describes himself as a businessman, states in a note that he believes certain books should be rewritten and given wider circulation. This he attempts in "Mainspring" with Miss Rose Wilder Lane's "The Discovery of Freedom."

Mr. Weaver has filled his book with many ideas, most of them of the level of the cliché. He falls into the trap of all venturers into a new field—he attributes all things to a single "cause." In his view the only important problem in social relations is the understanding of human energy, which he does not define.

Queries and Minor Notes

THE ANSWERS HERE PUBLISHED HAVE BEEN PREPARED BY COMPETENT AUTHORITIES. THEY DO NOT, HOWEVER, REPRESENT THE OPINIONS OF ANY OFFICIAL BODIES UNLESS SPECIFICALLY STATED IN THE REPLY. ANONYMOUS COMMUNICATIONS AND QUERIES ON POSTAL CARDS WILL NOT BE NOTICED. EVERY LETTER MUST CONTAIN THE WRITER'S NAME AND ADDRESS, BUT THESE WILL BE OMITTED ON REQUEST.

SMALLPOX VACCINATION

To the Editor:—In accordance with Navy practice, I maintain that if the result of vaccination is "primary" (or "take") the patient should be revaccinated seven to ten days later in order to ascertain whether the original vaccination stimulated complete or partial immunity. If the second vaccination results in an "accelerated" reaction, I should revaccinate until an immune response occurs. I contend that all patients who do not show an "immune" reaction should be revaccinated at seven to ten day intervals until an "immune reaction" occurs. Any colleagues contend that a "primary" reaction (one vaccination) is adequate for protection. Please discuss.

M.D., California.

ANSWER.—Theoretically your contention is correct that a person who is not susceptible to an attack of smallpox should have an immune reaction when vaccinated with potent smallpox vaccine. Actually the procedure which you suggest is neither practical nor necessary. If an unvaccinated susceptible person is vaccinated within three days of exposure to smallpox and the vaccination is successful it is almost absolutely certain that smallpox will not develop. Instances of this kind have been observed repeatedly in a smallpox hospital.

A successful vaccination in a person who has not been vaccinated successfully at any previous time is termed a "primary vaccination." If vaccination is repeated there should be a reaction of immunity. The duration of immunity resulting from a primary vaccination cannot be foretold accurately. Ordinarily a primary vaccination will afford protection against smallpox from five years to life. A loss of immunity can be determined by obtaining either another successful vaccination or an accelerated reaction. In considering an immune reaction it must be remembered that a proper interpretation rests on the knowledge that the vaccine lymph used in the procedure is potent. A "no take" or failure to secure any reaction from a vaccination should not be confused with an "immune reaction."

SPIDER VARICOSITIES

To the Editor:—Please discuss obliteration of the superficial, spider nevus type of varicosities that some women have on their legs. Is there a satisfactory intradermal injection?

James I. Routt, M.D., San Diego, Calif.

ANSWER.—If the central pool can be found this may be injected; however, others may appear and the results are generally unsatisfactory. Besides, there is danger of sloughing. The experienced operator soon learns to let this variety alone.

INCIDENCE OF CANCER

To the Editor:—What are the latest figures on the incidence of cancer in relation to the organs of the body? On what proof is cancer metastasis based?

Floyd Thurber, M.D., Hollywood, Calif.

ANSWER.—See Reprint 2537 from the *Public Health Reports*, entitled "Illness from Cancer in the United States," by Harold F. Dorn; also see the New York State Department of Health Annual Report, 1944, volume I.

Cancer metastasis is based on the presence in regional lymph nodes and distant organs of tumor foci having histologic features similar to the primary growth.

REPIGMENTATION OF HAIR

To the Editor:—A diabetic woman aged 74 seems to experience a change in the color of her hair from gray to that normal in her middle age after taking insulin. Are there other such cases on record? She is not taking other medicament and is not using hair dye or rinse.

Elmer W. Clarke, M.D., Norton, Mass.

ANSWER.—Apparent repigmentation of gray hair is observed not infrequently in diabetes mellitus after good nutrition and control of unbalanced sugar metabolism are restored. The reason for it is not known. Theories to account for it are: (1) improvement in nutrition and hydration; (2) correction of avitaminosis caused by diuresis or restriction of dietary intake; (3) restoration of endocrine balance, which has been altered along with the progress of the diabetes, and (4) xanthochromia affecting the color of the hair in much the same manner as it colors the skin a faint orange when diabetic diets are used, possibly by carotene which is not metabolized to yield vitamin A, possibly by deposit of other pigments such as those contained in butter and cream.

CLINITEST TABLETS

To the Editor:—Is the tablet method ("clinitest tablets," made by Ames Company, Inc., Elkhart, Ind.) acceptable to insurance companies in testing for urinary sugar? Is this method as reliable as using Benedict's or Fehling's solution?

R. C. Sadler, M.D., Whiteville, N. C.

ANSWER.—The use of "clinitest tablets" is approved by a number of the larger life insurance companies. Recently Blatherwick and Dworkin of the Metropolitan Life Insurance Company laboratory (Blatherwick, N. R., and Dworkin, J. H.: A Rapid Test for Albumin and Sugar in the Same Measured Sample of Urine, *J. Lab. and Clin. Med.* **32**:1042 [Aug.] 1947) have suggested the use of these tablets. Kasper and Jeffrey (Kasper, J. A., and Jeffrey, I. A.: A Simplified Benedict Test for Glycosuria, *Am. J. Clin. Path.*, Tech. Sect. **8**:177 [Nov.] 1944) found that the results obtained with the two methods were comparable. Both reagents contain copper sulfate, with the addition of sodium carbonate and sodium citrate in the case of Benedict's reagent and sodium hydroxide, sodium bicarbonate and citric acid in the "clinitest tablets." Sodium hydroxide is the alkali employed in Fehling's solution. The sodium hydroxide has an additional special use in the "clinitest tablets," since the heat for the reaction is provided by its heat of solution. Mixing is brought about by the evolution of carbon dioxide. In an answer to a query in THE JOURNAL (Oct. 10, 1942, p. 491), checks with Benedict's reagent and "clinitest tablets" were reported as good. The user was cautioned against allowing the tablets to come in contact with the skin. If a simultaneous test for albumin is desired an "albutest tablet" (Ames Co.), which contains sodium molybdate, citric acid and a small amount of effervescent base, may first be employed.

PENICILLIN PREVENTIVELY

To the Editor:—There is a practice among surgeons in this area of giving patients a single massive dose (100,000 to 500,000 Oxford units) of penicillin in isotonic sodium chloride solution (not oil and wax) following elective minor surgery with or without general anesthesia. This is used for the prevention of infection and postoperative complications.

How long will a suitable blood level of penicillin be maintained? Will this therapy prevent postoperative infection or is it a waste of penicillin?

M. D., Kentucky.

ANSWER.—A single dose of penicillin, 100,000 to 500,000 units in isotonic sodium chloride solution would maintain a detectable blood level of penicillin from four to six or eight hours. It is highly questionable whether a single dose of penicillin will prevent a postoperative infection. It would be sounder therapy to continue the injections at intervals of eight to twelve hours for three to seven days in order to prevent susceptible infections.

ROENTGEN THERAPY

To the Editor:—How does roentgen therapy in dermatology work? What does it do to the skin and its disease? Is it cumulative in effect, and if so for how long? Can it be recommended in the acute pyodermas?

M.D., Rhode Island.

ANSWER.—Roentgen rays appear to reduce the activity of cells in all their various functions. Just how this is accomplished is still an unsettled question, some attributing it to an ionization effect, others to a coagulation effect on the protein molecule analogous to the action of heat; still another explanation combines features of the two concepts to account for an altered concentration of intracellular and intercellular fluid. Much depends on the dosage. When the dose of rays is small, the cells are not perceptibly influenced. After a larger dose, there is a temporary increase in cellular division and cellular metabolism. Larger doses act to inhibit mitosis and to induce cellular degeneration, the degree of which depends on the variety of cells and the dose of rays, for tissues vary in their response to radiation. This period of depressed cellular activity is followed by a compensatory phase of hyperactivity and then by a return to normal. Radiations, however, are always injurious to cells which absorb them; the effect of repeated irradiation is cumulative, the degree of accumulation depending on the size of the dose and the interval between treatments.

Desjardins explains the effects of radiation on inflammatory conditions by assuming that "radiation by destroying some of the infiltrating leukocytes causes the protective substances in these cells to be liberated and to be made even more readily available for defensive purposes than when they were in the intact cells. This, and the increase in phagocytosis which follows the disintegration of the cells, represents the main effects of exposure to x-rays and irradiation." The majority of cutaneous diseases represents some form of acute or chronic inflammation with varying degrees of leukocytic infiltration, cellular hyperplasia, hyperemia and proliferation of connective tissue, with or without associated products of cellular degeneration. Herein lies the rationale for radiation treatment of certain diseases of the skin, including particularly the deep seated pyodermas.

137
48

"LIPIODOL" IN SPINAL CANAL

To the Editor:—The diagnosis of a ruptured intervertebral disk would be made easier in obscure cases if radiography of the spinal canal with iodized poppy seed oil 40 per cent "lipiodol" was safe. Has any one using this procedure ever attempted to remove the injected iodized oil through a caudal anesthesia needle inserted into the sacral canal and intentionally made to penetrate the dura? Then with the patient in Fowler's position the iodized oil could slowly be withdrawn and replaced with sterile saline solution. If this procedure has not been attempted, is there any reason why it would not work, since the heavier iodized oil will settle to the lowermost portion of the spinal canal?

Michael Carlozzi, M.D., Brooklyn.

ANSWER.—Opaque oil has been removed from the spinal canal by puncture of the dural sac through the caudal canal. It has been removed by trephining the posterior wall of the sacrum and aspirating the dural sac or incising the dural sac. These procedures are not necessary, in that the opaque oil can usually be removed through the lumbar puncture needle utilized for the introduction of the oil.

XANTHINE CONTAINING BEVERAGES IN GOUT

To the Editor:—What is the present feeling in regard to the use of coffee in gout or uric acid diathesis, and what is the recommendation with regard to substitution of caffeine-free coffees?

R. B. Heophill, M.D., Oak Park, Ill.

ANSWER.—Coffee, tea and cocoa have sometimes been eliminated from the diet of patients with gout because they contain xanthine bases which were assumed to produce an excess of uric acid and an increase in tophaceous deposits. Actually, no increase of true uric acid results from the dietary use of these beverages. Early studies on the conversion of methylated xanthines to uric acid were unreliable because (1) experiments were carried out on rabbits and species of dogs whose chief end product of purine metabolism is allatoin, not uric acid, and (2) methods were not available to differentiate xanthine from other urate substances.

It has now been determined that in human beings the xanthine bases of coffee, tea and cocoa are converted by partial demethylation to methylurates. This methylated derivative reacts, as does uric acid, with phosphotungstic acid and silver preparations to form reduction products which are indistinguishable by colorimetric methods of analysis from uric acid. By use of uricase, a method has been developed to measure urinary uric acid in the presence of methylurates. This uricase method has has shown that ingestion of caffeine, theophylline or theobromine does not increase the excretion of "true uric acid"; neither are methylurates deposited in tophi. Hence, coffee, tea and cocoa are allowed in the diet of patients with gout.

BILATERAL CRYPTORCHISM

To the Editor:—A man aged 21 (weight 194 pounds [88 Kg.], height 68 inches [173 cm.]) with bilateral cryptorchism, first became aware of this when in January 1945 the army induction doctors called it to his attention. The testes cannot be felt in the inguinal canal. There are no evidences of hypogonadism and the patient has normal ejaculations. On two occasions examination of the ejaculatory specimen revealed complete aspermia. Is hormone therapy advisable? Is surgery indicated, since the incidence of tumors in ectopic testes is much greater than in normally situated ones?

Milton Canter, M.D., Brooklyn.

ANSWER.—Unless the patient has some evidence of endocrine dysfunction, there is no indication for any hormonal therapy. A bilateral orchiopexy is indicated.

THROMBOEMBOLISM IN CHILDREN

To the Editor:—The problem of thromboembolism is receiving more and more attention. What are the possible explanations for the rare occurrence of this phenomenon in children as compared to adults, particularly in the surgical patients? Give references regarding relative rates of venous blood flow in children as compared to adults.

M.D., New Jersey.

ANSWER.—The rare occurence of thromboembolism in children as compared to adults has probably never been satisfactorily explained. At present the best explanation seems to be on a morphologic basis. Veins, as arteries, develop sclerosis with age. Just as the arteriosclerotic artery develops spontaneous thromboses due to atheromatous plaques and roughening of the intima, this occurs probably in the major veins also and is the best explanation of why thromboembolism is seen in the older age group. As far as can be determined, there is no difference in the coagulability of the blood in the young and the aged. As far as known there are no data on the rate of venous blood flow in children as compared to adults. In patients with severe peripheral arteriosclerosis there is undoubtedly less blood flowing through the veins of the lower extremities, since there is less blood entering the extremities. The incidence of thromboembolism is probably not really higher in the patients with deficient arterial circulation compared with those with normal arterial blood flow.

SYPHILIS

To the Editor:—On May 22, 1946 I examined a man, aged 42, for employment. Results of his examination were negative but the laboratory reported positive responses to Kolmer (Wassermann), Kahn and Kline tests. He gives no history of venereal infection. Tests of his wife, the second, are negative. I started treatment June 7, 1946, giving him weekly treatments as follows: ten injections of oxophenarsine hydrochloride ("mapharsen") 0.06 Gm.; then six of bismuth subsalicylate, 0.13 Gm.; ten of "mapharsen"; ten of bismuth and five of "mapharsen." During this time his Wassermann, Kolmer and Kline tests have remained positive, and after the last two injections of oxophenarsine hydrochloride he had loose stools. Am I warranted in giving this man any more antisyphilitic treatments? He has had twenty months of continuous treatments.

M.D., Iowa.

ANSWER.—It is unfortunate that in the beginning you did not get a titered serologic test on this patient and then follow him along with a monthly titered test. Moreover, there is even a possibility that this man may have a false positive reaction. One should always be suspicious of low titered reactions. A lumbar puncture should have been done in the beginning but may still be done; be sure that there is no involvement of the central nervous system. He may have an asymptomatic syphilis of the central nervous system. Only after all these precautions have been taken would it be possible to properly evaluate this patient's true situation.

If his lumbar puncture reveals that he has involvement of the central nervous system, it would be well to hospitalize him and give him crystalline penicillin G intramuscularly, 40,000 units every three hours, day and night, for three weeks. On the other hand, if his lumbar puncture reveals normal conditions and if careful examination of the cardiovascular system disclose nothing, it would be considered that the patient has a late latent syphilis and that further treatment is unnecessary.

Heavy metal therapy is more and more looked on with less favor than penicillin therapy. It is true that there are situations in which the former may be used as an accessory treatment, but first dependence is placed on penicillin.

V 1
194